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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

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NAVAL TRAINING SHIPS.

Capt. F. E. Chadwick, U. S. N., president of the Naval War College, wrote a letter for publication advocating sailing ship training for seamen apprentices for the navy. The letter was sent to a number of officers, some with much experience and others with less, for comment.

Fifteen officers, all told, approved the view of Capt. Chadwick, and accepted the suggestion that a sailing ship training is a good preparation for service on a mastless battleship or cruiser. Capt. Chadwick thinks that the sailing ship training makes character and produces the handy man and the active man. The whole tendency of his letter is to magnify the importance of the training with sails as peculiarly adapted to the development of desirable, manly qualifications rather than bookishness in the sailor.

Capt. Charles D. Sigsbee, U. S. N., alone appears in the discussion in the negative. He says that it takes too long to make a seaman of the old kind to attempt to get him through the training stations, and thinks that if we want a "seaman" who "is seven-tenths soldier and mechanic, then the best place to make him is not on board a sailing ship." For the ships of to-day men are needed to perform new duties.

"It would not be thought necessary on shore in haymaking to keep a man at the old-fashioned scythe for six months in order to educate him up to a seat on a mowing machine. That illustration about epitomizes Capt. Sigsbee's whole argument. The necessity for knowledge of sails seems to him likely to pass with the abandonment of their use. The training on sailing ships is good as gymnastics, but he thinks that setting up drill and plenty of practice with oars, instead of resort to steam launches, would keep the muscular form of the men."

Preparing a boy for service on sailing ships to put him on a man-of-war for which he has had no training confronts him "with sanitary conditions of which he is ignorant, with a complex terminology, routine and construction, and also a multitude of duties and an all-pervading and rigid discipline" that discourage him.

It is his opinion that much time is wasted at Annapolis in teaching seamanship with sailing ships and frankly admits that the influence for sails were too strong for him when he undertook to make a new definition of the word, suggested by the modernization of the fleet. The fight to keep sails reminds him of the efforts to prevent other new things—rifles for smooth-bore guns, metal for ships' hulls instead of wood, and steel for iron. He has held his views for fifteen

years, and he says that they are nearer realization than they were fifteen years ago. He would not bring up the naval apprentice on antiquities to prepare him to understand modern construction and modern terminology.

TONNAGE TAX RECEIPTS.

The Bureau of Navigation reports that tonnage tax receipts during the last fiscal year amounted to \$903,139, the largest annual total since the change of the law in 1884. The tax rates, however, are lower than those in the principal British and German seaports. From corresponding light dues Great Britain received \$2,421,903, and expended on its light-house and buoy system \$2,393,142. The appropriations for the Light-House Service of the United States were \$3,894,591. American vessels paid only \$67,704 tonnage taxes, the number engaged in foreign trade, chiefly with near-by ports, being very small. British vessels paid \$559,357. Steam vessels paid \$755,991, sail vessels \$146,857, and \$291 was collected as penal taxes. At New York the collections were \$294,120. At Honolulu \$22,160 was collected, an amount about equivalent to the total increase over the previous fiscal year.

REFORM SCHOOL SHIP.

In Sydney, Australia, the government has a nautical school ship which is used as a reform school. Upon it some 450 boys are put through a regular course of education and training. They have the studies of the common schools, and at the same time are drilled so that they are fit to be sailors when they leave. The ship is called the *Sobraon*, and is as well equipped as school training ships anywhere. The boys also have land quarters on one of the islands of the bay, and altogether they are well treated and as a rule are made into good men by their training. They have their cricket grounds, their swimming pools and all sorts of games. They are taught to swim and are put through a daily course of gymnastic exercises. They wash their own clothes, keep the ship in order, but do not contract work of an industrial character. After leaving they are apprenticed to farmers or business men in different parts of the colony of New South Wales; and the reports from these are that they do exceedingly well. The school is a success, and has been so ever since it was organized, about 35 years ago.

COAST ENGINEERS' WAGES RAISED.

The Marine Engineers' Beneficial Association No. 33, of New York, have issued a circular to the various lines of steamships running out of New York under the United States flag, giving the schedule of wages to be paid and the number of assistant engineers to be employed. For the foreign trade, which takes in Central America, South America and the West Indies, the vessels are divided into two classes. The first class comprises vessels of 2,500 tons gross and over and all vessels bound to Pacific ports. The wages for this class are: Chief, \$150; first assistant, \$90; second assistant, \$80; third assistant, \$70 per month. Second class takes in steamers of 1,200 tons and under 2,500 tons. The rate of wages for this class is: Chief, \$135; first assistant, \$80; second assistant, \$70; third assistant, \$60 per month. All steamers in the above classes are compelled to carry three assistant engineers. The coastwise trade is comprised of two classes, vessels of 2,500 tons gross and over being in the first class, and those of from 1,200 to 2,500 tons gross forming the second class. The rate of wages for each class is the same as above given. All steamers on a run exceeding twenty-four hours will carry three assistant engineers, and those on a run of less than twenty-four hours to have two assistant engineers.

CONDAMN THE CONNING TOWER.

Before the next Congress is organized and its committees are made up to determine the character and extent of future expansion of the navy, plans will be completed for several new battleships and armored cruisers. It begins to look as though these plans might provoke very warm discussion about some radical innovations that may be proposed.

The most important change that may be suggested will be the abolition of the conning tower. Discussions in the Board of Construction tended to show that the conning tower was becoming regarded as a vast, useless weight. When this idea of uselessness was touched upon by naval officers quite a shock was caused to those who had looked upon the conning tower as an indispensable place of observation for the commanding officer. When questions came to be asked as to where the conning tower had been put to use, answer was made that there was no record of any officer having fought his ship at Manila in a conning tower. From Admiral Dewey down every commander appears to have directed the operations of his ship from the open bridge. "Same was at Santiago," put in a blunt but reckless member of the board. "All but one," was the correction offered by the distinguished ordnance officer.

At all events it is considered more than probable that the day of the conning tower is over. British designers and constructors are for giving it up, according to naval officers. The weight that would be saved by omitting it could, in the estimation of the advocates of its abandonment, be more effectively employed in general or emplacement armor, in machinery, or in coal storage capacity.

Other modifications may be made in the new ships. A British naval officer recently at the Navy Department, was interested to know whether the United States naval constructors were disposed to regard with favor the suggestion now under consideration in England to cut down the top hamper of battleships and cruisers and to have everything aloft not higher than sixty feet. The necessity for masts, now that electricity is coming to be almost exclusively used for signaling purposes, seems to be diminishing, and the "mastless" ship may not be far off, even the military mast being threatened by the proposition to do away with the fighting top. Close-range fighting might justify top arrangements from which to pour fire into the enemy, but with guns effective at the great distances now observed in war, the fighting top is not regarded by advanced naval constructors as of great importance. Still other agitation, indulged abroad, is for a ship with decks clear of all structures except the turrets, conforming the vessel in fighting trim closely to a double-turreted monitor. These ideas make interesting reading of an article in the last issue of the Proceedings of the Naval Institute.

FRANCO-CANADIAN STEAM LINE.

The Franco-Canadian Steam Navigation Co., of Canada, (limited), has made application for incorporation. The purposes for which incorporation is sought, are: To own, charter and navigate steamships and all other kinds of craft including tugs and barges for the conveyance of passengers, and goods and merchandise between the ports of Canada and to and between the ports of all other countries, and to own and enjoy lands, docks, warehouses and other terminal facilities as are convenient for the purposes of the company. Their chief place of business is Montreal. The intended amount of capital stock is \$1,000,000. The names of the applicants are Francis H. Clergue, managing director of the Lake Superior Power Co., of Sault Ste. Marie, Ont.; Hon. Robert Mackay and Hon. Alfred U. Thibaudeau, Senators, Montreal, Que.; Hon. L. Melvin Jones, Senator, Toronto, E. S. Douglas, Philadelphia, U. S.; J. R. Booth, President of the Canada-Atlantic Railway; Geo. E. Drummond, W. E. Blumhart, Henry Miles and L. E. Geoffrion, Montreal.



CHICAGO.

Special Correspondence to The Marine Record.

It would now appear as if the North West would never catch up to her scheduled time of sailings, owing to trouble with the Belleville boilers.

The Sanitary District of Chicago will shortly begin the construction of a modern type bascule bridge at Randolph street, Chicago, at a cost of \$175,000.

The Scotch built, Canadian owned steamer, Midland Queen, is due here on Wednesday with a small portion of her Manchester cargo. She will at once enter the lake trade.

The best parcel of dock property in Kenosha has changed hands within the past few days and a large coal dock will be operated there by Messrs. Gorman & Kotz. Mr. James Gorman is mayor of the town.

The body of Capt. Edward Commerford, who had been missing two days, was recovered from the river at Chicago on Saturday. Commerford was sixty-eight years old and widely known on the river front.

The report that a Chicora spar was sighted on the lake near St. Joseph turns out to have been a fisherman's stake. The Chicora seems to have been effectually lost in a secret place and with a degree of totality seldom evidenced in Lake Michigan history.

The agents of the Western Transportation Co. and of the steamer Northwestern were fined \$25 and costs last week for throwing steamer sweepings and garbage into the river. Up to the present time there have been fifteen firms summoned for violations of this character. Most of the cases are still pending.

The barge R. L. Fryer, 527 tons, built at Detroit in 1880, owned by C. A. Calbick & Co., is in the hands of the Ship Owners' Dry Dock Co. for a rebuild on account of her collision with the Falcon in the "Soo" river. If Mr. Watters, superintendent of the yard, is given carte blanche he'll turn out a new Fryer and better than ever she has been, but it will be a big job on a little craft.

The steamer Falcon was libeled by the United States marshal at Milwaukee last week on a claim preferred by Capt. James Calbick, W. H. Wood and the Pilson Lumber Co., of Chicago, owners of the barge Robert L. Fryer, for damage sustained by the barge in a collision with the Falcon in St. Mary's river recently. After the steamer had been in custody a few hours she was released, as a bond had been prepared for her.

The lunatic notion of the Northwestern Steamship Co., has exploded and the fleet condemned for Atlantic service. The Northtown reached here this week after a voyage of 87 days and when overhauled she will be put in the lake trade. It is the published intention of the manager of the line to send the boats to the coast before navigation closes on the St. Lawrence, so that they have about 60 days lake work ahead of them.

Lieut. W. J. Wilson, U. S. N. of the branch Hydrographic Office has received a letter from Capt. K. A. Jensen, master of the Tampico, hence, all well at San Francisco after a passage, via the Straits of Magellen of 98 days. The Tampico was built at the yards of the Craig Ship Building Co., Toledo, and Capt. Jensen is the first lake seaman to take a craft around to the California coast. He had probably been there before though, and had ocean experience.

The steamer F. T. Heffelfinger, third of the fleet of four building to the order of the Peavey Grain Co., of Duluth, was launched at South Chicago on Saturday. The Wells, fourth and last of the fleet, will be ready for the water in about a month. The new boat is 450 feet long, 50 feet beam and 28½ feet deep and will belong to the 7,000-ton class. A. B. Wolvin, general manager of the steel trust fleet and James Wallace, general manager of the American Ship Building Co., were present.

Capt. Calvin Carr, manager of the Elphicke fleet and agent for a number of others, well known in marine circles here and a member of the Chicago Board of Trade for more

than twenty-five years, has posted his membership of that institution for sale and will retire from active business life. Capt. Carr, with his wife, will take up residence on a farm which he recently purchased near Oswego, N. Y., where he was born. The captain is sixty-six years of age and his early days were spent sailing vessels on the lakes.

General Passenger Agent W. K. Greenebaum, of the Williams line, announces that the contract for the new steamer which the company intends to build will be placed just as soon as the steel strike is brought to a close. Greenebaum says his line has an option on a berth in one of the large shipyards, and that the boat will be completed early in July, 1902. Of course, passenger agents like to laud their own lines, and keel lengths are good things to stretch in shipyards, but there is a limit even to lake shipbuilding and passenger boat equipment.

Another advance in sailors' wages is talked of, to take effect next week. The last raise was from \$1.75 to \$2, chiefly affecting lumber carriers. The union bases the raise on the intended 50 cent per M feet increase in freight rates. The sum of 25 cents per day for each man of a small crew doesn't seem much, but the owners of the small class of craft in the lumber trade say it cuts quite a figure in a property that is barely paying expenses now and is a losing investment in slack times, when they alone have to stand the outlay.

Lumber dealers are reaching out West and South so as to be well ahead of the trade in its briskest demand. From Lake Michigan prospectors are still traveling to the Pacific Coast, and it is learned that Jacob Mortenson, president of the Garth Lumber Co., of Garth, Mich., is now out there looking over timber lands. Walter Prickett, a lumber man of Sidnaw, formerly of Marinette, is looking over timber lands in Oregon. W. H. Hill, of Menominee, left recently on a second trip to the coast and A. B. Freeman, formerly manager for Raber & Watson, is now out there looking for a location. H. Scott, a cruiser for the Bay Shore Lumber Co., of Menominee, left last week for California to look over timber, which the company contemplates purchasing.

The report is sent out from here that "the Midland Queen is the ordinary type of coasting vessel and hails from Canada. She has been in the English coasting trade for the last year and her owners have decided to bring her back to the lakes again, the trade over on the other side having proved unprofitable. It was at first reported that the Queen would engage in the same trade as the Northwestern Steamship Co. between Chicago and European ports, but since the latter company was compelled to abandon the scheme because of the high rates of insurance, her owners have given up the idea." The foregoing is altogether in error. The Midland Queen was built for the lake trade to the order of Canadian owners, and this is her maiden trip, also her first cargo.

An electric log, the invention of Capt. A. N. McGraw, is being tried on the steamer North Land. The new log operates a register on the bridge or in the pilot house, and its principal advantage over the latest inventions is already apparent. Capt. Brown of the North Land, in speaking of the new invention, said that in a run of 250 miles the new log had not varied one-tenth of a mile, and says it will be the coming thing, being, he says, absolutely accurate and enabling a master in thick weather to tell exactly where he is at without leaving the pilot house or bridge. It is indeed a save-all if it does all that Brown says it will. On the other hand, patent logs are a drug on the market and this one is perhaps about as good as the average latest idea, in any case, it can be only one L, out of four, necessary to push a vessel safely over the ground.

When the steamer Madagascar reached Racine on Monday with a cargo of soft coal for the Racine Gas Company her captain was confronted with a demand on the part of the longshoremen for an additional 3 cents a ton for handling her cargo. The gas company refused to pay the extra amount and the men struck on the boat. The gas company must now take men from its trenches to handle the cargo, and it is likely that the steamer will be hung up for a week or more. Last spring the longshoremen made a rate of 12 cents a ton for handling coal for the regular coal companies. For the gas company the rate was made 15 cents. It was held by the men that the gas company received only soft coal of a kind hard to handle, and the other companies took both hard and soft, and therefore were entitled to a lower rate. The gas company gets about a half dozen cargoes a year, and the men say they could not make as good rates for the work. Vessel owners would need to look after a demurrage clause when chartering for Racine.

DETROIT.

Special Correspondence to the Marine Record.

The Straits of Mackinac car ferry Ste. Marie is in drydock for repairs after stranding during a fog on Graham shoal.

The late census places the population of Canada at 5½ millions in round figures; years ago the sister territory was credited with 6 to 7 millions.

Capt. Reid, the well known wrecker, is cleaning out the old hulls lying in the bay at Sarnia, they will be moved and beached somewhere where they can do no harm.

The Arnold Line has added the Chippewa and Iroquois to their fleet and now talk of another new passenger boat. The line controls the passenger trade in and adjacent to the Straits of Mackinac.

Capt. John Quinn, the submarine diver, will remove the wreck of the Smith & Post at Southeast shoal, under contract with the Lake Carriers' Association. Dynamite will be used and the spot cleared to four fathoms depth.

Assistant Secretary of the Treasury Spaulding, has remitted a \$200 fine imposed by the collector at Port Huron against Charles A. Eddy, owner of the steamship Penobscot, for a technical violation of the navigation laws in force in the St. Mary's river.

The steel cargo steamer Yosemite will be launched from the Wyandotte yards of the Detroit Ship Building Co. in about a week. The keel for the second of the new D. & B. line boats, the Eastern States, will be laid on the ways vacated by the Yosemite.

The steamboat excursion season will end about Sept. 15. The firm of Ashley & Dustin enjoyed an excellent season with their steamers Frank E. Kirby and Wyandotte, while the Tashmoo of the White Star Line has had phenomenal success and is still booked ahead up to Sept. 8. Next season the firm will have another speedy passenger steamer, and from all indications she will also have all the work she wants.

The local steamboat inspectors, or whoever keeps count of the number of passengers boarding steamers at Toledo euchiared the White Star Line out of 79 fares last Sunday by their wrong count. Manager Bielman is a genial, whole minded sort of a man, at the same time, the Treasury Department might be requested to recoup the owners of the City of Toledo to the amount of her loss on the passenger list through their not permitting the carriage of her full complement.

Orders were received here on Wednesday, to secure a score of firemen for the North Land, detained several hours at Cleveland, with a large list of passengers and coming up with a temporary crew in the fire-hold. The Duluth route was made in fairly regular time, but the Chicago-Buffalo trips have been irregular all through. This is a great set back for the new route, as passenger boats are expected to make fairly regular time or there is no use counting on them for any purpose.

The steel steamer O. M. Poe, Capt. John Lowe, owned by the Pittsburg Steamship Co., collided with the steamer Mary C. Elphicke, when abreast of Sarnia on Monday, and both the large craft are badly damaged. The collision occurred near the spot where the Fontana and Martha came together a couple of seasons ago, and as the current is strong there it is supposed that the vessels sheered against their helms. Capt. John Lowe, is one of the most careful, skillful and experienced masters on fresh water, and a host of people will be sorry that the casualty took place.

One of the Belleville boilers was removed from the steamer North Land here on Monday night and it will be placed in the sister ship North West when she arrives. For some time the North West has had trouble with her tubular boilers leaking and has been running whole days behind her schedule. This type of boiler appears to be a complete failure in lake service, as they have been a continual source of annoyance, danger, trouble and expense during the past few seasons. They can burn out firemen quicker than anything that was ever put in a stoke hold and they have an awful list of minor casualties to answer for.

The engineer corps at the present time is at work getting out new charts, which will be printed in colors, and they will replace the old charts that are now in use. In speaking of the work, Major Fisk, Corps of Engineers, U. S. A., said that the general plan is to re-survey all the lakes to meet present and future conditions for the guidance of deep draft boats. The difficulty with existing charts, he says, is that most of them were got up when the boats of 12 and 14 feet draft were considered big ones, but now that the 500 footers, drawing 18 feet and over, are the rule rather than the exception, it has become imperative that the charts be brought up to date.

BUFFALO.

Special Correspondence to The Marine Record.

Coal freights remain unchanged at 50 cents to Lake Michigan and 35 cents to the head of the lakes.

The damage to the bottom of the new Lehigh Valley steel steamer Wilkesbarre, through striking at the Limekilns, has been repaired. Seven plates had to be taken off.

Coal shipments have been slightly delayed on account of a strike at the Erie dock, on account of the discharge of four men. The trouble appears to have been smoothed over.

Last week the Tonawandas received 37 lumber cargoes aggregating 24,000,000 feet. The total for the month up to August 24th was 67,000,000 feet, and the rush is likely to be kept up.

The Western liner building at the Union yard, now a branch of the American Ship Building Co., will be launched about September 1, when one of the Brown syndicate steamers will be laid on the ways.

The increased facilities at the West Shore dock of the Minnesota Co. for discharging iron ore has made Buffalo a port for good despatch and cargoes will no doubt be more frequently consigned here in the future.

Twenty million feet of lumber for one week's receipts is about what the Tonawandas got last week though the week before only ten million feet were discharged. The last record to date is eight million feet in two days.

Coal shipments for last week showed a decided increase over the previous seven days, the total being 95,580 tons. Of this amount Chicago got 21,106 tons and Milwaukee 23,000 tons. Duluth shipments amounted to 9,250 tons.

When the new English-built steel steamer Donnacona was dry-docked here last week it was found that fourteen plates had to be taken off owing to her striking in the St. Lawrence river. She is a sister ship to the Strathcona, Canadian owned and insured abroad for lake service.

The steamer Terry, recently purchased by the Barry line at New York is expected to arrive at Montreal to-day. She will proceed via the canals to Chicago. Capt. Joseph Gorman is in Montreal, and will take charge of the Terry from there. Capt. Gorman may be made permanent master of the new Barry line boat.

The following meteorological observations are furnished by the office of the United States Weather Bureau, Buffalo, for the week ending August 27: Prevailing wind directions for the week, south; highest velocity, 34 miles, west, on the 23rd. Mean temperature for the week, 76°; highest temperature 88 on 21st; lowest, 64 on 24th.

The world's record for handling lumber is now held at Tonawanda. The steamer Viking, Capt. Richardson, discharged 1,150,000 feet in twelve hours and her consort the Vinland, Capt. Stevens, 1,251,000 feet in eleven hours, both vessels consigned to the Eastern Lumber Co., cargoes discharged into lighters. An old salt water sailor says that he once took three months to discharge about the same cargo in Montevideo.

Great care should be exercised on passenger boats to guard against swindlers and other pickpockets. Every ordinary precaution is taken by the managers of the boats, but there is always the too easy victim at hand. Another mark is valuable baggage, some of the dishonest clique have been transferring checks from their own to more pretentious looking parcels and then presenting the changed check in calling promptly for the duplicate.

Captain A. B. Wolvin's lake fleet and elevator proposal for Montreal has not been accepted by Hon. Joseph I. Tarte, Dominion Minister of Public Works. Mr. Tarte has not made public his reasons for an adverse decision in the matter, but his stand has created surprise among the harbor commissioners, the majority of whom heartily favored acceptance of the plans. The Wolvin plan, in modified form was as follows: It contemplated terminal facilities, freight warehouses, and elevators at Port Colborne, which were to be supplemented by ten steel lake vessels of full canal size, and terminals at Montreal, with elevator facilities, built by harbor commissioners and leased to Mr. Wolvin, who was to guarantee 5 per cent. on the outlay. The harbor commissioners may now construct and operate public elevators without an assured business for them, such as Mr. Wolvin and his associates were in a position to guarantee. It is stated that the rejection of Mr. Wolvin's plan will preclude W. J. Connors, of this city, from receiving any part of his \$50,000 guarantee which he posted when the erection of his elevators commenced. It was generally understood that Capt. Wolvin's plan, if accepted, would have been on Connors' guarantee.

CLEVELAND.

Special Correspondence to The Marine Record.

The Lumber Carriers' Association decided not to advance freight rates to \$3 per M. feet until Sept. 15.

The largest cargo carried into Conneaut this season is credited to the Edenborn, 7,380 tons. The Elwood record for Ashtabula was 7,328 tons.

The steamer D. M. Whitney, of the Gilchrist fleet, loaded 6,720 tons of coal on Saturday at J. W. Ellsworth & Co.'s dock in ten hours, which is a record.

The city ought to place gas buoys in the vicinity of the three cribs now blocking the approach to this port. It is almost a miracle that they have not been run into during hazy weather.

Next Monday being Labor Day, work at the docks will cease from Saturday night until Tuesday morning. There is just time to figure closely on the handling of boats for the spell off at dock work.

The committee on aids to navigation of the Lake Carriers' Association will purchase a small steamer and convert her into a light-ship to be stationed on the south-east shoal, Pelee Passage, Lake Erie.

The Mary C. Elphicke will be dry docked and repaired after discharging her ore cargo. She collided with the O. M. Poe near Sarnia. The Poe is undergoing temporary repairs at the yards of the Jenks Ship Building Co., Port Huron.

Now that the yards of the American Ship Building Co. are so well supplied with orders it is known that new contracts will be placed with other builders. The Craig Ship Building Co., Toledo, will likely fill the next order for new tonnage.

It was quite a revelation to learn a year or two ago that lake vessels could reach the coast and trade there, though the trading didn't amount to much. Now we have Scotch and English built tonnage sent out for lake service. This month the Midland Queen and Donnacona are added to the Canadian fleet.

The twin-screw, steel passenger steamer North Land discharged her crew of firemen and was consequently detained here several hours on Wednesday. The passengers were very impatient over the unlooked for delay. The Belleville boilers are said to be responsible for the dissatisfaction among the fire-hold crew, but it has always been so.

The Detroit & Cleveland and the Cleveland & Toledo lines announce that they will make special excursion rates on Saturday night for Labor Day. The cheap rates will be good for return until Monday night. This is the annual concession which is made by the lines to labor's carnival, and it is expected, from the inquiries that are now being made, that the travel will be heavy.

On the 20th inst. five men were killed by an explosion of gas at Crib No. 3 of the water works, two miles beyond Crib No. 2, where the previous week eleven lives were lost. The men are supposed to have struck a vein of gas, which was ignited by a spark from a pick. The explosion wrecked the shaft, blew the machinery up into the air and let it in the waters of the lake, which drowned the five men working at the bottom of the excavation.

The following meteorological observations are furnished by the U. S. Weather Bureau for the week ending August 28: Prevailing wind direction during week, north; highest velocity, 27 miles, north, on the 24th; mean temperature for the week, 71°; highest temperature, 83, on the 28th; lowest, 59, on the 25th; sunrise and sunset data computed for local time at Cleveland, August 29, sun rises at 5:22, sets at 6:46; Sept. 1st, sun rises at 5:25, sets at 6:35; Sept. 4th, sun rises at 5:28, sets at 6:29.

The launch which is being built at Detroit for Major Dan C. Kingman, in charge of the engineering work, in this district, has been named The Inspector. She is to be used for the purpose of allowing the engineers to inspect the work on the cribs, piers and various channels, and also for such surveys as are necessary to locate the dumping grounds. The larger engineers' steamer is called The Visitor, because she goes from port to port in the district. The smaller one, therefore, is called The Inspector because she will do the detail work. She will be delivered here next week.

Ocean and coast engineers can sail on the lakes and rivers but our men are considered ineligible there and can only ship as firemen or oilers. The M. E. B. A. embraces all, though each are on a different footing in their own trade and calling. Geo. Uhler, president of the association, will hardly join the Labor Federation, so the whole question, says a lake engineer, will have to be gone over this winter,

and I would not be surprised to see a split up in the ranks of the association and the president still holding the reins of the coast branches and likely the Mississippi, as new lodges are being formed down there quite regularly. It is certain that the salt water engineers won't affiliate with the longshoremen's union.

Mr. H. A. Hawgood recently contracted with the American Ship Building Co. for the construction of a large steel cargo steamer, after considerable delay in going over plans, specifications, etc., directly, or within a day or two after his brother, Mr. W. A. Hawgood, placed an order for another steamer and now we have the three Hawgood brothers, Arthur included, closing for a third steamer, all to be sister ships of 6,200 tons capacity for next season's delivery at a given cost of \$275,000 each. The new boat will be 434 feet over all, 414 feet keel, 50 feet beam and 28 feet deep. She will have triple expansion engines with cylinders 22, 35 and 58 inches, with 40 inch stroke. Steam will be furnished by two Scotch boilers 13 feet 2 inches in diameter and 12½ feet long. She will be fitted with the Ellis & Eaves induced draft system. According to the contract she will be completed and ready for business next May.

A short time ago the steamer Helena, when bound from Toledo to Detroit, ran foul of some obstruction in the channel that has never been charted. The master of the steamer notified the engineers that at the time his boat brought up she was abreast of Monroe, Mich., and about seven miles from shore. It is thought that this is the same obstruction which the Ravenscraig found last year, but at that time the bearings were impossible to obtain so as to locate the shoal accurately. The Helena was able to take better bearings, and upon these the engineers believe they can locate the obstruction. An appropriation was asked of the department for prosecuting the survey, and the same has just been granted. Major Kingman, Corps of Engineers, U. S. A., has notified Mr. Blunt, his assistant at Toledo, to proceed to the survey with the steamer Visitor. It is hoped to find the obstruction and place a buoy upon it. The Helena's report says it lies a little to the eastward of the course from the outward end of the straight channel out of Toledo, to the Detroit river, so that masters would do well to dot the locality on their charts until it is properly marked or removed.

LAKE ERIE LEVELS.

Speaking of the investigations and talk that has been current for several years to the effect that Lake Erie levels are falling and that before long something would have to be done to maintain the level, Major Fisk, Corps of Engineers, U. S. A., stationed at Detroit, said that conditions were not at all alarming, but that if the worst should come, it would not be a very difficult task, in his opinion, to build a dam across Niagara river to raise the Lake Erie level several feet, if necessary. He further said that there is no danger that the power plants at Niagara would consume enough water to materially affect the lake level.

An interesting work upon which Major Fisk and his staff of engineers are now at work is the system adopted for gauging the flow of the Detroit river to ascertain the amount of water which passes through the river. Similar work is now progressing at the "Soo," while that in St. Clair river has been completed. Gauging the St. Lawrence river and Niagara river has been finished, and that at Detroit will probably be completed in about a year. This work is part of the important undertaking by the government to gather data regarding the lake water levels and measurements of the various points named will be used in the work of finding out the supply from the various sources and trace down the extent and volume of outlet or overflow waters throughout the season.

NEW CHARTS.

UNITED STATES LAKE SURVEY OFFICE, }
CAMPAU BUILDING, DETROIT, MICH., Aug. 27, 1901. }

New charts, in colors, of Maumee Bay and river including Toledo, also Sturgeon Bay canal and Harbor of Refuge, Lake Michigan, have just been issued and are now on sale at the U. S. Lake Survey Office, Campau Building, Detroit, Mich., at 15 cents per copy. A similar chart for the harbors at Duluth and Superior costs 30 cents per copy.

W. L. FISK,
Major, Corps of Engineers, U. S. Army.

Two steamers on the stocks at the yards of the Craig Ship Building Co., Toledo, building to the order of the United Fruit Co., New York, are to be launched between Oct. 15 and Nov. 1.

CORRESPONDENCE.

We do not hold ourselves responsible in any way for the views or opinions expressed by our correspondents. It is our desire that all sides of any question affecting the interests or welfare of the lake marine should be fairly represented in THE MARINE RECORD.

RIVER AND HARBOR WORK.

CHICAGO, ILL., August 27, 1901.

To the Editor of the Marine Record:

Knowing that the MARINE RECORD has always advocated the value to the whole country, as a nation, in liberal appropriations being made for the improvements of rivers and harbors, also that you have maintained how it is wrong in principle to make all citizens contribute their quota for purely local work, is the cause of my addressing you on this occasion.

I notice from the RECORD columns that a call is now being made for all coast, lake and river commercial interests to meet at Boston, Mass., and formulate plans for making what appears to be, at first blush, a concerted raid on the Treasury at the next Congress. The convention is not given even the semblance of a national marine improvement committee, but rather does it seem to raise the question of Congress carrying out works for the advancement of personal riparian rights and the protection of products and industries bordering thereon.

The proprietors of one or more lake shore manufactorys have no right, rhyme or reason to join forces in making a demand on the Federal Government for special protection in the form of tremendously expensive and extensive works, such as piers, breakwaters, dredging, etc., or, if so, those most directly benefited should be required to contribute *pro rata*. There would be just as little reason in the River and Harbor Committee advising an appropriation for a concrete boulevard to be built in front of Johann Von Der Flukens, Coney Island summer resort, as there would be in the wire pulling tactics of Hans Doodledans looking towards Federal protection for his goose-pen on the shores of a lake or river.

The average interested citizen seems to think that it is the Mrs. Partington province of the United States to take care of the water, and, if it laps where it is not wanted to lap, or does not flow where it is personally desired to flow, or in greater or lesser quantities, then, forsooth, it must be made to do so, as witness the western irrigation project foisted upon the last River and Harbor Committee, but, fortunately, for the revenue of the country, there is not the "I Will" influence of a Chicago drainage canal commission to bring about the successful accomplishment of joint individual schemes for the enhancement of private rights, wealth and privileges and to accept the taxes of the Dakota wheat grower for the distinctly personal benefit of the proprietors of the lake front furnace, even admitting, for the form of argument, that by so doing the production of the furnace would thereby be cheapened to the people, and in a similar ratio, as would the national building of a network of railroads through the sparsely settled farming communities of the great undeveloped West.

River and harbor works are solely and distinctively for the advancement of the general maritime traffic, as it differs from inland commercial progression. The United States Government is not offering subsidies or bounties for the allocation of industries on its coast line or water front, nor are prizes thrown in to further reward the generally prosperous and flourishing industrial pursuits carried on in those localities.

There is great safety, gratification and a probable salvation in having such a man as Hon. Theodore E. Burton in the chairmanship of the House River and Harbor Committee. Now, if ever, and never before has he been so thoroughly enraport with the duties of his important office, and all interests are safe in his hands, for he will fight the fight of the just while shunning the pamperings of the unworthy cause.

Yours truly,

J. N. S.

LIFE IN SAWN TIMBER.

DULUTH, Aug. 24, 1901.

To the Editor of the Marine Record:

I wish to mention, through the columns of the MARINE RECORD, a singular circumstance that I witnessed years ago. I built the schooner Pioneer in 1866 and sailed her up to July 1868, when it was found necessary to dock her to repair bot-

tom damage and in taking several bottom planks off our surprise was great to find that the floor timbers, which were mostly white ash, had sprouted and brush from $\frac{1}{4}$ to 1 inch in size had grown out from the corners of the 10 by 10 timbers. It is the only case where timber actually gave out life and grew after being built into a vessel and to such an extent that we had to take the lining all out to cut away the brush so that it would not choke the limbers.

Yours truly,

CAPT. WM. OSBORN.

RECORD OF OLD TONNAGE.

FRANKSVILLE, WIS. Aug. 26, 1901.

To the Editor of the Marine Record:

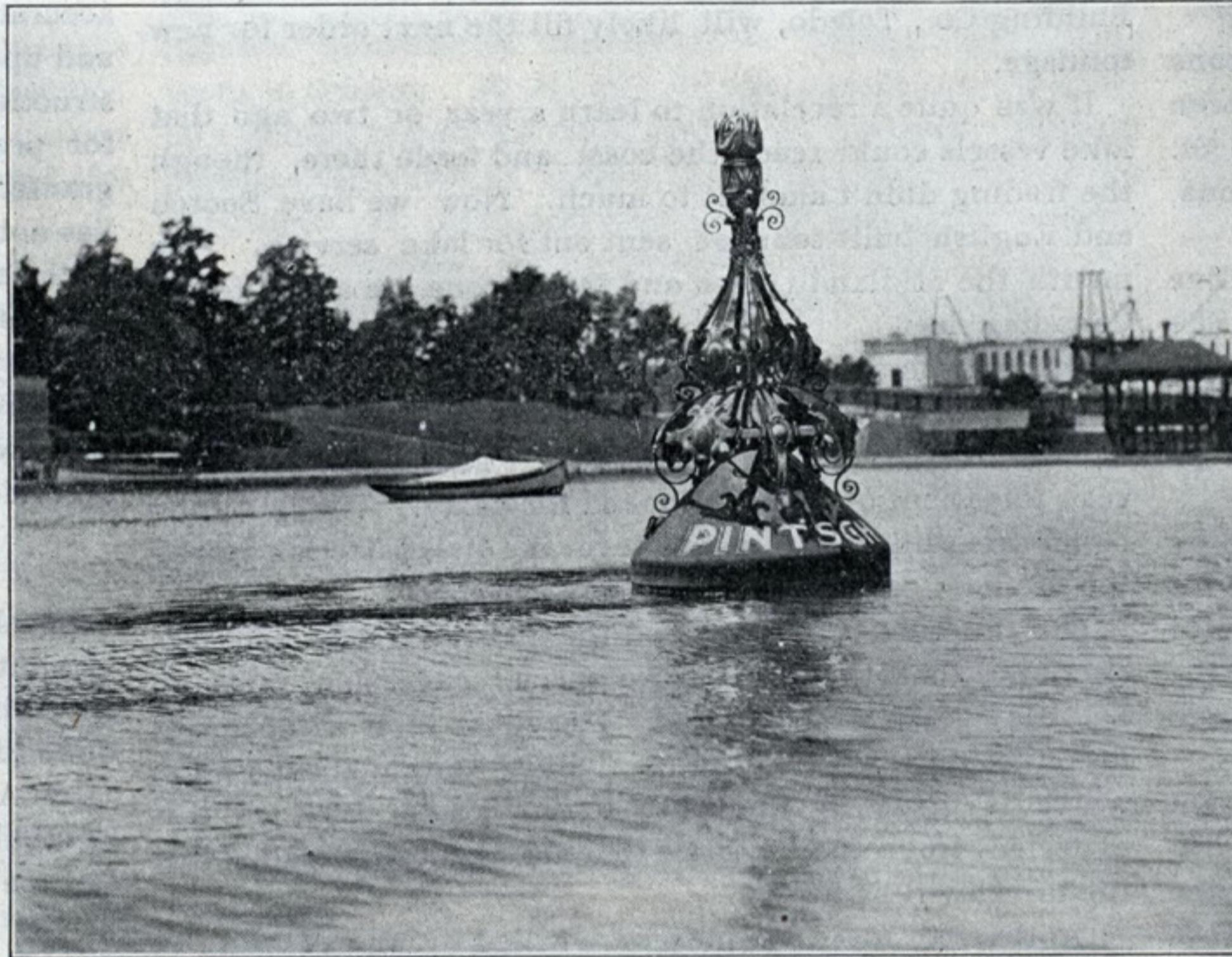
Will you please state in the RECORD the builder, place of building and date of the lake steamers Amazon, 1,406 tons, Chicago, 935 tons, New York, 704 tons, Susquehanna, 540 tons, Tioga, 695 tons and Wabash, 932 tons. These boats all ran in the 70s.

Yours truly

HERMAN C. RUNGE.

In looking up this inquiry we ran across an omission in the records and accordingly corresponded with Capt. A. B. Drake, Chief Inspector of Inland Lloyds, Buffalo, who very kindly furnishes the following.

The Inland Lloyds, as an association, extends back to 1887 and previous to the Inland Lloyds the Associated Lake Underwriters published the book as "Lake Underwriters Association" but their records do not mention any ship which passed out of existence previous to 1871, the date of the first Register they published. As the Wabash was sunk



PINTSCH GAS LIGHTED BUOY.

by collision with the steamer Empire State before 1871 there is no record in my office as to the time, place where she was built, in fact there is nothing about her. She was built in Cleveland and my impression is that Quayle & Martin were the builders, in 1863 or 64. Capt. John Kirby, of your city, brought her out and no doubt can give you the information you want. The record of the others is as follows.

Str. Amazon.....	1406	A. A. Turner, Trenton	1873
" Chicago.....	935	Banta & Bidwell, Buffalo	1855
" New York(833)	704	" "	1856
" Susquehanna..	540	Moses, Cleveland	1858
" Tioga.....	695	Quayle & Martin, Cleveland	1862

The Barge May Richards is built on the bottom of the Susquehanna. From the records we have the propeller Wabash, 721 tons, was built in 1862 and sunk at Port Huron through collision in 1870.

MARKING THE OFFICIAL NUMBERS.

CLEVELAND, O., August 28, 1901.

To the Editor of the Marine Record:

I have recently sailed on a steamer where no official number was shown on her beam and it seems never to have been there. Is there not a law requiring the tonnage of a vessel to be painted on the beam as well as the number. What is the rule and law in this case?

Yours truly,

P. C. R.

The rules governing the marking of official numbers and tonnage are as follows:

Every documented vessel is required by law to have an official number given by the Commissioner of Navigation, upon application of the master or owner through the collector, and documents will not be delivered until proper

evidence is produced that the number has been marked upon the vessel's main beam.

For all seagoing vessels of 100 tons or over numerals and letters are to be designated, and for all other vessels numerals only. Signal letters may also be assigned to vessels of less than 100 tons when special application is made therefor through the collector.

The official number of a vessel must be carved or marked on her main beam, preceded by the abbreviation "No" and her name, number and signal letters must appear in all her documents. The number must be marked at the expense of the owner, in Arabic numerals, at least three inches in height, when the size of the main beam will permit. If the main beam is of wood, it must be carved or branded in figures not less than three-eighths nor more than one-half inch in depth. If the main beam is of iron or other metal, it must, if the beam is black, be marked in white oil paint, and in black oil paint if the beam is any other color. The main beam of vessels plying upon the western rivers is considered to be the beam under the after side of the starboard hatch; and that of other vessels to be the beam under the forward side of the man hatch.

The vessel's net tonnage must also be carved or permanently marked on her main beam, under a penalty of \$30, on every arrival in a port of the United States.

A CONTINUOUS GAS-LIGHTED BUOY.

ILLUSTRATED.

Among the marine exhibits at the Pan-American Exposition in Buffalo may be found one of the Pintsch lighted buoys. The buoy is equipped with the flashing light device and is shown in the park lake on the exposition grounds, where it appears to excellent advantage.

On this page will be found an illustration showing one end of the lake, and the Pintsch buoy appears prominently in the forward part of the picture. The tower is somewhat different from the standard type as it was made of ornamental construction especially for this exhibition buoy. The building in course of construction, shown in the background of the picture, is the Albright Art Gallery.

TO MANN THE NAVY.

The Bureau of Navigation will this year ask of Congress an increase of not less than three thousand men to the authorized enlisted strength of the Navy. With the recent completion of several battleships and with the prospective completion of several other vessels now under construction, it has become imperative that there be a corresponding increase in the enlisted personnel. At the present time the Navy is short five thousand men in the enlisted strength of twenty-five thousand authorized. It is hoped by the Bureau of Navigation that before Congress convenes the needed five thousand men will have been obtained, and that then it may, with perfect propriety, ask for an increase of three thousand, bringing the total up to twenty-eight thousand. An official of the Bureau of Navigation is now preparing a statement which will conclusively show that the commissioned and enlisted strength of the Navy will have to be greatly increased during the next five years to keep pace with the proposed plan of increase for the floating strength. In 1905 the enlisted strength should be as large as 35,000 men.

LIGHT-HOUSE BOARD NOTES.

The lists of lights and fog signals of the United States, the lists of beacons and buoys in the different light-house districts, or copies of bulletins, published by the Light-House Board, can be obtained, free of charge, on application to the Light-House Board, Washington, D. C., the inspectors and engineers of the several light-house districts, the United States Custom-Houses, the principal agencies of the United States Coast and Geodetic Survey, the Hydrographic Office of the United States Navy, and the Branch Hydrographic Offices.

All bearings are given approximately. Bearings are magnetic and distances in nautical miles on the Sea and Gulf coasts. Bearings are true and distances in statute miles on the Northern Lakes and Rivers. Bearings relating to visibility of lights are given from seaward. Geographical positions are given approximately. Heights of lights are referred to mean high water. Depths are referred to mean low water. Odd numbered buoys are black, even numbered buoys are red. HS. signifies red and black horizontal stripes. PS. signifies black and white perpendicular stripes.

SHIPS REGISTER AND CLASSIFICATION SOCIETIES.*

(CONCLUDED)

With the advent of the steamship, and the change of building material from wood to iron and steel, new rules had to be formulated, adapted to the changed conditions. Each society has its own code of rules and method of calculating scantlings. They are all, however, based on the principal dimensions of the proposed vessel. For example, we wish to build a small steamer in Hong-Kong. She is intended to run between here and Macao or similar voyages. B. V. provides rules for seven different classes for wood vessels, and it would be absurd to put the weight of material required for a ship intended to round Cape Horn into a vessel desired for local trade. We decide to place her under two degrees P (Small Coasting Trade). By looking into the tables we find the numeral of the proposed vessel, produced by multiplying the length, breadth, and depth, by a given fraction. The regulations show exactly how the dimensions are to be measured, and this numeral is the fundamental point in designing the ship. We simply multiply it by the figures given in the tables, and get the size of every beam, frame and plank; masts, spars, and rigging, iron or steel, lower masts and yards; anchors and chains or hemp hawsers; size of rudder, number and diameter of pintles; dimensions of windlass; thickness and length of bolts, iron knees, through fastening whether iron or copper, metal sheeting, and so on through every detail of the vessel. Suppose we build a steamer to Lloyd's rules. Say a coaster to run between here and the northern ports. It is not necessary to make that vessel as strong as though she was intended to cross the Atlantic. 90A is ample for the requirements, and by saving weights we get lighter draft which is an important consideration on the China coast. By a somewhat similar system of numerals as that already described, but which vary for different types of vessels, we are enabled to pick out the dimensions of everything required for the proposed steamer, the ship itself, the number and thickness of water-tight bulkheads and method of stiffening, diameter of boat davits, size and design of anchor crane, pumping arrangements, ballast tanks, and everything essential to the vessel.

But the classification societies go further. The machinery is an integral portion of the steamship. Therefore it became necessary to see that the power which drives the vessel should be equally as reliable as the hull that contains it. Lloyd's appointed surveyors in all the important manufacturing centres, whose duties consist in seeing materials tested; such as ship plates and bars, chains and anchors; crank shafts, boiler plates and furnaces, and other important parts of the motive power. These are all rigidly examined and proved during the process of manufacture, and when bearing the brand and certificate issued, are accepted without demur in any part of the world. The machinery for testing materials is a very expensive plant, and therefore can only be installed in central manufacturing districts. Lloyd's possess several such installations in Great Britain, and have recently established similar testing appliances in the United States; to each one is appointed a resident surveyor, who is a permanent employee of the society, and who must see that the requirements exacted are carried out to the letter.

A ship retains her "class" for four years, when she has to undergo a survey, and if found in good condition the class is continued. After another period, No. 2 survey becomes due, and so on every four years until such time as the vessel deteriorates by old age, when either the class is jugged or a lower character assigned to her. In case of grounding, or other accident, by which a vessel has been injured, special surveys are held, and the vessel must be referred to her original quality or conditions before she is classed.

It is not within the province of this paper to discuss the merits of the various societies. The foreign associations are conceived as being necessary to the welfare of the countries which they represent; but as occurred in the early days after the formation of Lloyd's, differences of opinion are bound to arise; and some years ago a number of persons interested in shipping arrived at the conclusion that Lloyd's Rules were not sufficiently elastic to admit the new designs of steamers then coming into vogue to the

full benefits of classification. The result was the formation of the "British Corporation," in 1890.

This society spent upwards of two years in preparing rules and tables of scantlings; most exhaustive investigations were made into the laws of naval architecture and marine engineering, and existing rules thoroughly analyzed.

No provision is made by this society for the classification of wooden vessels, but for iron and steel it claims to give a more scientific distribution of material used in the construction, massing it at those points of the structure where the greatest strains fall, and providing such a system of connection as affords the best proportion of joint to plate. It, like other societies, is constituted one of the assigning bodies for the administration of freeboards, and its work is fully recognized by the Board of Trade. A large number of fleets register exclusively in this society, among the local ones being the China merchants.

The "Plimsoll Mark" must not be confounded with the work of the classification societies. In 1875, Samuel Plimsoll, M. P., got a measure passed whereby every ship over 80 tons, sailing under the British flag, must bear on her sides a distinctive mark, which must not be submerged in salt water when the vessel leaves port. The province of the classification societies is to fix the position of this mark. The design is invariable, and consists of a circle not less than 12 inches in diameter, crossed by a bar 18 inches long, and 1 inch broad. If the ship is painted a dark color, the mark must be white or yellow. If the hull is light then the disc must be painted black. Similarly there are lines showing the level of each deck above water. These marks are not merely painted, but the perimeters are cut into the plating so that any surveyor in any port can easily find if the position has been altered.

An addendum to the above is a series of horizontal lines familiarly known as the "gridiron." Granting that the disc load-line is the safe limit generally, it would be unfair to the shipowner to compel him to keep an unnecessary high freeboard for voyages where in all human probability the sea will be as calm as an inland lake; and similarly for excessively stormy waters it is unsafe to load a ship down to the disc. To meet this variation this series of bars was designed. The highest is marked F.W. (fresh water); this allows a ship when loading in a river to immerse the disc several inches, as she will rise to her proper level when she gets into the denser water of the ocean. The other marks are I.S. (Indian summer); S. (summer, ordinary voyages); W. (winter, ditto); W.N.A. (winter, North Atlantic). This, the lowest mark of all, indicates the tempestuous nature of the route. There is now being brought forward a "light load line," which doubtless will become law ere long, as it is unquestionably a fact that a ship may be equally as unseaworthy when insufficiently ballasted as when too deeply immersed.

The particular society under whose rules the ship is classed is indicated by initial letters on each side of the disc; thus L.R. for Lloyd's Register; B.V. Bureau Veritas; B.C. British Corporation; and if not under any of them then it becomes B.T. Board of Trade.

As the primary object of classification is to secure insurance, the higher the class the lower being the premium, it follows that classification societies have done more to secure that ships should be seaworthy than any other influence. Acts of Parliament have sometimes been the means of producing floating coffins in the endeavor of owners to design vessels to conform to B.T. requirements and evade tonnage dues as much as possible, but the underwriter wants his vessel and cargo to arrive safely at their destination, and hence pure business achieves results better than could ever have been accomplished by philanthropy.

THE Army and Navy Journal says Admiral Evans will no doubt be able to show that he was correct in his statements as to the circumstances attending his relief from light-house duty during the administration of Mr. Chandler. So direct an impeachment of his accuracy of statement, as is contained in Mr. Chandler's published letter, coming from so authoritative a source, cannot be allowed to go unanswered, and a court of inquiry—which we believe the Admiral holds to be called for in such cases—will no doubt be asked for. We have never held in any very high esteem such methods of deciding extra-official controversies, but now that the precedent has been set we presume it must be followed. If charges against an Admiral, made by a dock-yard laborer who knows how to write, require such notice, it would seem that those formally presented to the department by an ex-Senator of the United States and ex-Secretary of the Navy, who still holds a high place under the government, equally necessitate attention.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

Maritime Lien.—A state legislature has no authority to create maritime liens. The Universe, 108 Fed. Rep. (U. S.) 968.

Findings of Master.—Where the right to a maritime lien for supplies depends on questions of fact, such as whether the supplies were ordered by the master and furnished on the credit of the vessel, and the evidence is conflicting, the finding of the master thereon, who heard and saw the witnesses, will not be disturbed. The John McDermott, 109 Fed. Rep. (U. S.) 90.

Contract of Affreightment—Breach—Lien.—Where parties in possession and control of a steamship under a contract with the owners assigned and transferred such charter and contract to libellant, under which said steamer was to proceed to a certain point, and take on a cargo, but the contract was not performed either on the part of the assignor of the contract or of the vessel, no lien exists against said vessel, as the contract of affreightment had not been entered into. The Universe, 108 Fed. Rep. (U. S.) 968.

Damage—Proximate Cause—Ice.—Where a canal boat, on which a cargo of produce insured under a policy providing that it did not cover any damage from ice, was sunk by striking a hidden obstruction, and before the boat was raised and repaired the cargo was partially frozen, and, because of the delay caused by the injury, could not complete its voyage before the canal was closed by ice, the proximate cause of the loss was the sinking of the boat, the freezing of the cargo being a mere incident, and the insurer was liable. Devitt vs. Providence Washington Ins. Co., 70 N. Y., Supp. 654.

Towage—Compensation for Voluntary Service—Amount.—Where a steamer not engaged in the towing business, nor fitted therefor, interrupts her voyage to tow a partially disabled vessel into port, such facts are to be considered in fixing the amount of her compensation for the service, and she is entitled to a larger award than would amount to a reasonable compensation for the same service if performed by a tug engaged in the business. In such case, where a steamer valued at \$25,000 was delayed in her voyage eight hours, she was held entitled to an award of \$350.00. The J. C. Pfluger, 109 Fed. Rep. (U. S.) 93.

Recovery of Libel Paid.—An owner of a wharf at which a scow had been unloaded libeled the scow in admiralty for the amount of the wharfage. The owner of the scow, without contesting the claim, paid it to the proctor of the libellant, and then brought his action in the state courts, and recovered it from the libellant. In this action it was found that the plaintiff did not owe the wharfage; but it was not found that the defendant had, as libellant, been guilty of fraud or extortion, or that he knew, or ought to have known, that the scow was not liable. Held, that the money paid in the admiralty suit was paid voluntarily, and not under duress of goods, and that, upon the facts proved, it could not be recovered. Turner vs. Barber, 49 At. Rep. (N. J.) 676.

Salvage—Nature of Service—Salvage or Towage.—The German bark Pfluger, after leaving San Francisco on a voyage, met with a sudden squall, which carried away her mainmast and mizzen topmast, fore-topsail and fore royal yard, injuring her decks to such an extent that they leaked whenever a sea was shipped. She abandoned her voyage, and made for Santa Barbara, 200 miles distant. After reaching a point in Santa Barbara channel twelve miles from port, about 11 o'clock at night, she met a steamer, which, at request of her master, who stated that he was not in peril, but desired to expedite his arrival to communicate with the agents, towed the bark into port, there being a dead calm. Held, that the service was not one of salvage, but of towage only, and to be compensated as such, the bark being in no immediate peril, nor so disabled as to justify any reasonable apprehension for her safety if left to her own efforts in making port. The J. C. Pfluger, 109 Fed. Rep. (U. S.) 93.

Taking Injured Seaman to Nearest Port—When Required.—Libellant was mate on a schooner which left San Francisco on a cod-fishing cruise in Alaskan waters, all the crew being on a lay. When 500 miles from Port Townsend libellant was struck by the mail boom, without fault on the part of any one, and his leg was broken in two places. There was no surgeon on board, nor any one competent to treat the injury. Libellant asked to be taken back to shore, and the wind was favorable, but the master proceeded to Unalaska, 1,750 miles from the place of injury, which he reached in sixteen days, and from that port libellant was sent back to San Francisco. By reason of the delay and the motion of the ship, libellant suffered much additional pain, and his injury was rendered permanent. Held, that it was the duty of the master, under the facts shown, to at once proceed to Port Townsend, which was the nearest available port where libellant could have received proper care and treatment, and that his failure to do so rendered the owners liable in damages. Whitney et al. vs. Olsen, 108 Fed. Rep. (U. S.) 292.

*From a paper read before the Institution of Engineers and Ship-builders of Hong-Kong by W. G. Winterburn, managing director, Victoria Foundry, Hong-Kong.



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regarded.

CLEVELAND, O., AUGUST 29, 1901.

THE talent of the United States Weather Bureau Service held an annual convention in Milwaukee this week. If a cog has slipped relative to daily predictions the reason is obvious.

IT is now in order to petition Congress to increase the inner harbor facilities, etc., of the larger lake ports, by extending their limits to the breakwaters. "We need it in our business."

WHAT a delightful chimera it is to imagine and talk about Cleveland's "harbor of refuge." The fleets of weather-bound vessels that don't ride to an anchor in safety behind its magnificent piers would furrow the bottom like a ploughed field.

EVEN if in a generation hence we are to find by natural increase an influx of Deweys it is not too early at the present time to lay the ropes for their training. Future naval heroes will no doubt be "to the manor born" but they must also be to the profession bred.

IF we take the case of the steamer Assyrian, lost on Cape Race, Newfoundland, we should have recorded in the addenda to a wreck and casualty chart the fact that this Atlantic line steamer was totally lost on account of the fog signal at that point being mistaken for another steamer's whistle. How many previous casualties were due to this inefficient aid to navigation may be learned by consulting the wreck chart now in course of preparation by the Newfoundland Minister of Marine.

RELATIVE to the departure of floating specially made casks in an effort to obtain some information regarding the set and drift of Arctic surface currents, it now appears that the original suggestion came from the President of the Geographic Society of Philadelphia and that Capt. Shoemaker, Chief of the Revenue Cutter Service is wholly responsible for the attempted distribution of the casks for two years past. None of these aquatic messengers have been heard from. Doves and cats come back, casks never return.

IN making the entrance to lake ports only 200 to 300 feet wide a flagrant error is being perpetrated. These widths should be at least the length of a vessel of the modern type. Of course it is no place to turn a vessel, but, in the event of one going or getting partly athwart the entrance at piers or breakwater openings the entire trade would be blocked, and this too for no possible reason. What would be thought of opening new streets and highways where an ordinary vehicle would be unable to turn around? Let adequate openings be left in all the lake front boulevards.

THE CHANGE OF TIME.

Premising that someone has said "the change of time worketh wonders," we now come upon the astounding proposition to do away with the old-fashioned naval training ships under canvas.

Time was, and is still easily to be recalled, when even man-o-war's men could hand, reef and steer, and, if fairly seasoned, could cross a yard, strike a top-gallant mast or house a topmast with some degree of alacrity; they also witnessed an anchor catted and fished at times and various other experiences without which it was thought impossible ever to obtain the guts of a sailor.

We now note the change of time where the erstwhile flat-foot is about to become seven-tenths soldier and mechanic and three-tenths lubber. Jack was generally handy about most anything, horse-riding for instance, now he is to be made still handier in his modernized sphere. Gradually, and by easy stages, slowly but never so surely, has the age of knotted ropeyarns passed away. The ropehauling, marlinspike marynal is still to be found, the species is not entirely extinct; but, like a *rara avis*, his habitat is becoming more seldom.

There is quite as wide a gap evidenced in the higher branches of sailorizing, brought about through the change of time, as is noticeable in the lower and lesser branches of the occupation nautical. The officer of to-day has not the slightest need of loading himself down to the scuppers with the rules and practice of theoretical and practical navigation. Canvas is no longer considered or available in the fight to conquer an opponent or win the elusive lucre, and time would be worse than lost if a second thought were permitted to cross the memory regarding the method of "tending ship at single anchor." We have tried hard to lose the art, it is fast being lost, and the loss is our gain, as well does it count for the inconceivable glorification of future generations. Time changeth all things.

PECULIARLY WORDED NOTICES.

If there is any occasion for using correct wording in formulating notices and instructions, and there is, we consider that the "Notices to Mariners," sent out from the departmental offices should be as near exact as it is possible to construe them.

It is but recently since we were burning all colors of gas in the gas buoys on the lakes, as the worded instructions gave us red gas buoys, black gas buoys, etc.; also do we color sticks of timber by issuing notices of striped spars, black spars, red spars, etc., all of which might be more properly expressed in official notices.

Perhaps the crowning attempt at inaccuracy comes to us this week through the Dominion Department of Marine and Fisheries when we are told that,

"Information dated 2d August, 1901, has been received from the Branch Hydrographic Office at Sault Ste. Marie that the whaleback barge Sagamore was sunk on 28th July, in the upper St. Mary river between Iroquois Point and Gros Cap."

The wreck lies in 72 feet of water between $\frac{1}{2}$ and $\frac{3}{4}$ mile N.W. of Gros Cap reef gas buoy. Its exact location is marked by a spar buoy.

The Sagamore measured 35 feet from keel to truck.
This notice affects Admiralty chart No. 320."

The first paragraph is beyond cavil and known to all men, the second avoids coloring either the gas or the spar, but leaves a question as to the exact veracity of the 72 feet depth at all times, as also a guess of $\frac{1}{4}$ of a mile relative to the distance and a perfect misleader regarding the N. W. bearing by not positively stating whether it is magnetic or true in this particular instance. The third paragraph is the consequential daisy which we make the rap at in this case, as follows:

"The Sagamore measured 35 feet from keel to truck." Well! she didn't, and therein lies the perpetration of an official untruth, a misconception of terms, an unpardonable ignorance of the use of nautical phraseology or marine wording. No one ashore would name the cellar an attic, and yet this is what the naval sharp at Sault Ste. Marie has made the Canadian Marine Department accentuate. It is either right or wrong; will the Hydrographic Office, Navy Department, please explain, or deign to state what is meant? We can all guide ourselves wrong easy enough, but the better way is to be armed with the truth. There is little danger in sweeping off any number of trucks, but if we are to encounter whaleback turrets, paint on the shell plates of cargo tanks might possibly experience slight abrasions, discernable, if you please, only to the practised eye.

Another peculiarly worded notice, which comes to us from the same source, is that a steamer passed over an unknown obstruction with force enough to list her, but that her consort, drawing ten inches more water, and steering presumably in her wake, did not find the boulder or felt no impact, no exact bearings or distances given. Such notices are best left out of type or, at least, not quoted with the authority of the United States Government to publish.

VESSELS are driven ashore, boilers go on exploding and loss of life is regularly taking place, yet the public seldom or never learns the reason for these deplorable casualties. It must be surmised that the government inspectors should be able to throw some light on these occurrences, yet they never give evidence, their inspections are never questioned, they seldom resign from office and die less often than other men, or it would appear so, only, that they don't have to die to prove their value? to the country. A vessel and her equipment is safe and seaworthy, or it is not. The Treasury Department pays a host of men enormous salaries, office and traveling expenses, etc. to assure the public of a vessel's condition, but, do they do anything in a proper manner? These men are now under civil service rules, their acts or notions are above and beyond public criticism, besides, their wily chief can wriggle out of any departmental dilemma.

THE port boiler of the passenger steamer City of Trenton, owned by the Wilmington Steamboat Co., exploded on Wednesday, killing eleven persons and injuring over a score of others. Now will the local inspectors of steamboats hold an inquiry and condemn their own inspections? The findings of coroners' juries, the judgment of the people and all court proceedings are treated with an apparent contempt by these employes of the Treasury Department, that should no longer be permitted to prevail. They inspect boilers and certificate people to work them, they also license others to watch the workers, placing all on their oaths to tell of any weaknesses which may develop in hull or equipment, and, yet, their inspections, certificates and licenses result in a continued regularity of loss of life. Moral—The United States Steamboat Inspection Service is not what it ought to be, not by a mill site.

CLEVELAND made a record a few days ago in loading a coal cargo of 6,720 tons in ten hours. This calls to account a recent cargo loaded at Penarth dock, Cardiff, South Wales, where 2,155 long tons was loaded in two hours and ten minutes, or, say at the rate of 1,000 tons per hour, compared with the Cleveland record of 672 tons. By the way, that Cardiff is an historical old spot, deriving its name from a Roman general, whose legions once camped there. Needless to say the Roman noble would be slightly amazed if he could float around and see the black diamonds handled on his old camping ground in the fashion the Taff Vale Railway Co. do it now. But there, p'raps he is waltzing around atmospheric like and taking due cognizance of the 15,000,000 tons shunted around by this railroad company each year.

THE marine hospital service is investigating the relation of rats to bubonic plague, and Past Assistant Surgeon Rosenau has made an interesting report on the subject. He says it has been definitely ascertained that the rat is susceptible to the disease. An epidemic may be foretold by an increased mortality of the rats, for it seems that they first contract the disease and then transmit it to man. The only reason the plague did not spread in San Francisco was because it did not become prevalent among the rats. The problem then is how to get rid of the rats. Various kinds of virus have been tried with a view to introducing an epidemic among rats that would not harm humanity, but with indifferent success thus far.

THERE is the everlasting question whenever a casualty happens, regarding a vessel's equipment, did she have, or did she not have, proper life-boats, rafts, buoys, etc. There is of course, and as all connected with shipping are aware, a United States Steamboat Inspection Service, composed of men sworn to inspect, license and certificate almost all sorts of craft, and still the casualties involving loss of life and property are of daily occurrence. The recent wreck of a lake craft with loss of life, just happened to show that she had no metallic life-boat, not that it would have been of any more use than a wooden boat, only that we are credibly informed all lake steamers are compelled to carry such.

COMMISSIONER of Navigation Eugene T. Chamberlain has prepared a report showing that the tonnage tax receipts during the last fiscal year amounted to \$903,139, the largest annual total since the change of the law in 1884. The tax rates, however, are lower than those in the principal British and German seaports. From corresponding light dues Great Britain received \$2,421,907, and expended on its light-house and buoy system \$2,393,142. The appropriations for the light-house service of the United States were \$3,894,591. American vessels paid only \$67,704 tonnage taxes. British vessels paid \$559,357.

THE revenue cutters stationed on the lakes ought some times to visit sparsely settled districts where wrecks occur and amalgamate harmoniously with the residents thereof. The object for indulging in this sort of pastime would be to instil into the minds and hearts of the settlers and others the difference existing between *meum* and *teum*. As things are now, the flotsam, jetsam and lagan from a wreck is considered fair plunder. The Revenue Cutter Service might be in better business than umpiring private yacht races.

LAKE FREIGHTS.

Iron ore still continues to hold the key of the lake freight situation. Charters are placed at opening rates, from which there has been no deviation during the entire season. The only feature worth mentioning is detention at discharging ports, otherwise shipments are brisk at the fixed rates.

Rates on coal remain at 50 cents to Lake Michigan, Buffalo or Ohio ports and 35 cents to the head of the lakes. Ohio shippers strongly demurred at paying the Buffalo rate with the consequence that tonnage charged ports to load at the best figure offered.

The rate on lumber from Lake Superior was to advance from \$2.50 to \$3 per M feet on September 1st, this date has now been changed to September 15th, with brisk chartering.

Grain rates are quoted at 1½ cents on wheat from Chicago with chartering being done from Fort William and Duluth at 2¼ cents and later loading up to 3¼ cents into November. Chicago 1½ cents on corn and 1¾ cents to Georgian Bay.

PORTAGE LAKE CANAL.

Hingston & Woods, of Buffalo, have finished the dredging contract in Portage Lake canal across Keweenaw Point, Lake Superior.

The work was carried out under a continuous contract provided for under the same act as the harbor work under way at other important points. It was commenced in May, 1899, and has cost \$172,000. The estimated amount of material removed is 1,732,000 cubic yards.

The new channel has a depth of twenty feet and a width of not less than 120 feet at the bottom. It is twenty-five miles in length. The revetment work and the breakwater piers at the entrance were not included in the Hingston & Woods contract. The lower one was completed last season and the upper one will be finished this year.

The estimated expense of the whole improvement is about \$1,065,000. The new channel is much used for heavy tonnage the amount of which is said to be steadily increasing. In 1900 the reports showed that 4,000 vessels passed through with a total tonnage of 1,749,291 tons, and an aggregate of 32,875 passengers.

BOILER EXPLOSION WITH LOSS OF LIFE.

The steamer City of Trenton, owned by the Wilmington Steamboat Co., while on her route between Philadelphia and Trenton, N. J., exploded her port boiler on Wednesday, killing and injuring over a score of persons.

The boilers of the City of Trenton were inspected last June by the local inspectors of the United States Steamboat Inspection Service, Treasury Department, and stood a hydrostatic test of 263 pounds to the inch. She was allowed to carry 195 pounds and her safety valve, the company's officials say, was so arranged that steam blew off at 160 pounds. Engineer Murphy maintains that there were seven inches of water in the boiler at the time of the explosion.

The steamboat City of Trenton was launched at Neafie & Levy's shipyard last March. She was built for the Wilmington Steamboat Co., to ply between Philadelphia and Trenton, and was designed for speed in shallow waters between these cities, her draft of less than five feet permitting her to run at top speed on low tide. She was 162 feet long and 32 feet beam.

AN AMERICAN BRIDGE BUILDING INDUSTRY.

Mr. O. Gagen sails on the Hamburg-American line steamship Fuerst Bismarck, this week, for Hamburg, Germany, from which port he will proceed to Russia as a special representative of the Scherzer Rolling Lift Bridge Co., of Chicago, for the Russian Empire.

The Imperial Russian Government has been and is now more energetically improving a number of the large rivers within the empire, so as to receive ocean vessels. It is also enlarging and modernizing its ancient canals, and has entered upon the construction of several ship canals, which will ultimately form connecting links for the transport of ocean steamships and war vessels, entirely within the Empire of Russia, from the White Sea to the Baltic Sea, from the Baltic Sea to the Black Sea, and from the Black Sea to the Caspian Sea.

The advantages of the Scherzer rolling lift bridge for these great river and canal improvements were brought to the attention of the Russian officials and engineers who visited the United States several years ago, with a view of studying and adopting in Russia the most approved methods of railroad, waterway and canal constructions.

The interests of the Scherzer Rolling Lift Bridge Co. within the Russian Empire have become so extensive as to require the establishment of permanent general offices at St. Petersburg. Mr. Gagen is a subject of the Russian Empire, who has for a number of years been connected with Russian consulates and has made an extensive study of American institutions, engineering and business methods. After visiting all of the important seaports and waterways of Russia, Mr. Gagen will return to the United States by way of the Trans-Siberian and Chinese Eastern Railroads.

In Japan, Mr. Gagen will visit a number of the principal cities and seaports, with a view of further developing the business of the Scherzer Rolling Lift Bridge Co., already established in Japan. It is expected that his mission will take about a year, and that he will return by way of the Pacific route to Chicago.

LETTERS AT DETROIT MARINE POST OFFICE

AUGUST 28, 1901.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Albridge May	McAvoy Jos.
Allen Jas., Jenney	McGrath D. P.
Anderson Walter 2, Hackett	McAlpin Marion
Anderson Frank, Cora A.	McCarty Frank
Busbin D.	O'Brien J., Livingstone
Boehmer Alfred, S. K.	Martin Ormond A. J., Norwalk
Brown Henry, Arizona	Outhwaite J. W., Germanie
Batien A. J.	O'Brien Walter
Benson Ed., Ossifrage	Parker Frank B.
Blanchard Alfred	Peters Wm., Tacoma
Blair Ben, Appomatox	Quick Fred
Boyce Leon M.	Rothermel E. H.
Carr Wesley	Simon Eugebe, Omaha
Carlsen Ludwig 2, Johnson	Swan Willie, Australia
Cooban James, Goshawk	Strong Edw., Marietta
Cate Warren, Case	Searfess Harry, Meriden
De Champlain Zenon	Sieber A. L. G., Smeaton
Egan Dan, Hiawatha	Sellers Percy
Foster Geo.	Smith J. A.
Finegan J. J.	Scott Jos., Hoyt
Frasier Chas., Venus	Shanks John
Findley Mrs. G. W., Venus	Shoup Alfred
Glendon Tom 4	Schrivyer Jno. C., Sweetheart
Gassom Peter, Maryland	Shelton Frank C.
Henderson Robt.	Shusston Leonard
Hodges Arnold	Stumpf Peter
Hous W. E.	Shaffer Edw., Mariposa
Henderson Geo., Mascot	Seger Arta, Ogemaw
Jessen Gus., Arizona	Trombley Andrew, Living-
Janson Carl	Vrooman C. H., Angeline [stone
Kniery Edw., Goshawk	Van Camp Capt., Mary Amelia
Koehn Chas. W.	Vaillancourt Leon
Kroft Edw., Carrington	Van Avery Geo. 3
Lane Jno. A., Peshtigo	Weiss Geo., Sheldon
Leslie Sandy, Rochester	Wallace Jas., Omaha
Lindsay T. C.	Whitney W. M., Venus
Morris Geo. C.	Williams Henry
Miner Mrs. Nellie	Wilson Chas.
Moore M.	Willi Frank, Queen City
Merrell Oren	Webb Geo. 2
McGrath Wm., Elphicke	Welch E. A. 4, Lockwood
McQueen Wm., Santiago	Woods W. W., Wadena
McIm Geo.	Ward Mary, Berlin
McCarter Jno.	F. B. DICKERSON, P. M.

DULUTH-SUPERIOR.

Special Correspondence to the Marine Record.

Ashland iron ore shipments up to August 18 amounted to 1,624,509 tons, an increase of 33,540 tons over the quantity shipped the same time last season.

The steadily increasing receipts of grain indicate the beginning of a livelier business in the grain freight market and the outlook is more hopeful. Freights are steady at 2½c. for wheat and 2c. for corn to Lake Erie.

The Ontario & Rainy River Railway Co. is building extensive docks at Port Arthur. An elevator will also be erected, with a capacity of a million and a quarter bushels. The railway construction is being pushed rapidly, and rails are now laid 150 miles west from Port Arthur.

The United States Steel Corporation steamer Gen. Orlando M. Poe was fined \$200 by the collector of the port for violating the navigation rules of St. Mary's river. The vessel is charged with passing a steamer between Everen's Point and the Dark Hole, which is not permitted by the rules.

The wrecked steamer Preston has been seized by deputy United States marshal as the result of a libel sworn out by Alexander St. Clair & Co. to secure a claim of \$6,000 which that firm has against the boat, the claim is for assisting the Preston after she was abandoned by her crew near Port Arthur.

John Millard, mate of the steel tow barge Norton, died at the Budd hospital on Tuesday, from injuries received through the parting of a wire-hauling line while moving the vessel alongside the dock at Two Harbors. Ernest Millard, his son, lives at West Bay City, and was notified of the accident.

The Scott-Graff Co. will saw and dock about thirty million feet of pine standing in the locality of Two Harbors, for the Richardson & Avery Lumber Co., they are now at work on an eight million feet contract for the Street Chetfield Lumber Co., Chicago, and the logs are being towed to the Duluth mill from Maple, Wis.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Duluth, for the week ending Aug. 27. Prevailing wind directions during the week N. E.; highest velocity 24 N. W. on the 22nd. Mean temperature for the week, 67; highest temperature 76 on 21st; lowest 61 on 27th.

The steamer Estelle was fined \$500 for carrying kerosene while transporting passengers to and from Park Point, a summer resort near here. If the oil had not been loaded aboard on top of the passengers there would probably have been no kick coming, although it is against the rules to carry oils, acids, etc. on deck with passengers.

Assistant Secretary of the Treasury Spaulding remitted an entire \$200 fine recently imposed by the collector at Marquette, against Henry Ball, of that city. Capt. Ball is master of the tug Sea Gull, and was fined for a technical violation of the navigation laws in force in St. Mary's river. As the violation was unconditional, the whole amount was remitted.

The final order in the libel against the tug W. B. Castle, which was sold by the deputy United States marshal several months ago, was filed in the Duluth office Friday. The intervening libels of D. E. Stevens, Harry Hawkes and N. H. Witt, are dismissed by stipulation and the clerk of court is directed to pay over to Searle & Spenser, proctors for Mrs. Mary B. Inman, the former owner of the boat, the balance left in his hands after paying all claims and the costs of suit.

"We expect to make considerable improvement in the West Superior yards of the American Ship Building Co.," said Manager Wallace, of Cleveland. Mr. Wallace is manager of that company, and was in Superior this week on business connected with it. "In the first place," he continued, "we will enlarge the old dry-dock from 500 feet, its present length, to about 700 feet. New sides will be built and new sheet piling put in along the water front. A new power house will be built, and the system so changed that the power can be centralized and supplied from one station. The compressed air capacity will be increased six-fold, and the machines will all be driven by electricity instead of steam. These improvements will be finished as soon as possible, and will cost from \$75,000 to \$100,000."

The Donacona, a sister ship to the Strathcona, built in Great Britain for the iron ore trade between Michipicoten and Hamilton, has now reached the lakes. Both steamers are owned by the Quebec, Hamilton and Fort William Navigation Co., of Hamilton, Ont.



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ST. JOSEPH, MICH.

RYERSON'S TECHNICAL LIBRARY.

A most unique departure and somewhat of an innovation is the publication of Ryerson's New Technical Library by the firm of Messrs. Joseph T. Ryerson & Son, Chicago, iron merchants and special agents.

We had just finished the perusal of a brochure forwarded to us by the firm, entitled, "The Strange Story of Shan Dai, Pharaoh's Chief Boiler Maker," a fanciful sketch written by Mr. R. R. Shuman, editor of the Boiler Maker and Sheet Metal Worker, and printed in that magazine in serial form (the pamphlet since captured by a local machinist) when along comes serials 5 and 6, also from the Ryerson Technical Library, and evidently from their bureau of printing, possibly also the handiwork of Mr. Shuman, editor of the Boiler Maker and Sheet Metal Worker, presumably another publication issued by the Ryerson firm.

No. 5 takes up the subject of boiler bracing and embodies information of value to boiler makers and their foremen and layers out. It also contains a series of diagrams showing the head bracing and flue spacing of standard tubular boilers recommended by the Hartford Steam Boiler Inspection & Insurance Company.

No. 6 is devoted to "Little Giant" pneumatic drills, hammers, etc. Part I is devoted to a description of the drills, tables giving their capacity and directions for their use. Part II is devoted to descriptions and illustrations of "Little Giant" hammers, including the new long stroke hammer. Part III will particularly interest the mechanical engineer and student of mechanics, as it is a technical treatise on hammers and drills, being an extract from a paper on the subject by Ewart C. Amos, a member of the Institution of Mechanical Engineers, London, England, read before that body in March, 1900.

It is stated that Joseph T. Ryerson & Son purpose issuing still other books of this series and they hope to make them all of general interest to the trade. The firm is one of the most reliable and best known in the west. Established in 1842 and incorporated in 1888 speaks volumes for the integrity and business-like attributes of the house. We wish this innovation of publishing technical literature by those best versed in the trade and its practical application, much success, and doubly so, as we learn that it is free to all Milwaukee avenue comers or senders on addressing.

BRITISH SUBMARINE BOATS.

Vicker's Sons & Maxim, who are building five submarine boats for the British Navy, give the following particulars in regard to the vessels, which will soon be launched. They will be 62½ feet long, 11¾ feet beam and will have a displacement of 120 tons when submerged. They will be propelled by 160 horse-power gasoline engines when on the surface and by storage batteries when submerged. Each boat will carry a fuel supply that will enable it to steam 400 knots at a surface speed of nine knots an hour and seven knots when submerged. The armature will consist of one torpedo tube at the extreme end of the bow, two feet underneath the water line. Each boat will carry torpedoes 11¾ feet long. The engines and the automatic moving rudders will prevent the boats from inclining at an angle while diving and rising, will keep them submerged as long as desired and will bring the vessels to a horizontal position when submerged. The official trial will consist of a run of ten knots on the surface and two knots submerged.

TREASURY DECISIONS.

INSPECTION OF STEAM VESSELS.

Duties of inspectors of steam vessels relative to the inspection of vessels owned by the United States.

TREASURY DEPARTMENT, August 13, 1901.

Sir: This department is in receipt, by your reference dated August 8th instant (Hon. Wm. Cary Sanger, Assistant Secretary), of a letter from the Assistant Quartermaster-General, U. S. Army, in which is quoted a telegram from the general superintendent army transport service, San Francisco, Cal., as follows:

On April 14, 1899, at request of Secretary of War, orders were issued from Treasury Department, Washington, for the inspectors of steam vessels at San Francisco to thoroughly inspect army transports and certificate same in custom-house, as is done with vessels under Treasury Department. This has been carried out up to the present time by officials of Treasury Department here, to the entire satisfaction of transport service. Treasury officials notify me that, under new ruling of Supervising Inspector-General Dumont, special certificate only will be issued to transports. When the transport service was organized it was considered absolutely essential to take every precaution possible on account of importance of service and large numbers of officers, troops, and civilian passengers transported. Frequent inspections were made and annual inspections made as in the merchant service and properly certificated through custom-house here. I earnestly request that custom which has obtained heretofore in transport service be continued.

In reply, you are informed that so much of above quoted telegram as alleges that this department, in its letter of April 14, 1899, had directed that the local inspectors at San Francisco, after examination and inspection of United States transports, should "certificate same in custom-house, as is done with vessels under Treasury Department," is without foundation in fact, as you may ascertain by consulting this department's letter of April 14, 1899, referred to, which no doubt is on the files of your department. Therefore, the Supervising Inspector-General could not have overruled a decision having no existence.

It is true the Supervising Inspector-General reports that when he accidentally learned that the officers at San Francisco were treating Government vessels in all respects the same as the law required of them in regard to merchant vessels subject to steamboat inspection laws he did call their attention to their misapprehension of their duties in regard to the inspection of United States transports in letter as follows:

July 17, 1901.

United States Local Inspectors, San Francisco, Cal.

Gentlemen: Your letter of the 3rd instant, requesting that report of tonnage of United States transport Hancock be corrected from 6,001 to 5,305 tons, has been received, and the request complied with. This being a vessel owned by the United States, it should have been given a special certificate of inspection as such, and should not appear in the regular reports, to this office, but should be mentioned in a special paragraph of the annual report only. See paragraphs relating to Government vessels, fourth district, page 55, and fifth district, page 59, my annual report, 1900.

JAS. A. DUMONT, Supervising Inspector-General.

The instructions contained in above letter of the Supervising Inspector-General being in accordance with the practice always heretofore existing, certificates of inspection of Government vessels not being filed in the custom-house, as is done in the case of merchant vessels, for the reason that in the latter case such certificates are required there by statute (sections 4421, 4423, and 4424, Revised Statutes of the United States), whereas "public vessels of the United States" are specifically exempted from the above and all other statutes relating to the inspection of steam vessels. The conditions laid down in a certificate issued to a merchant steam vessel may be enforced by fines and penalties, whereas if such certificates were issued to vessels of the United States, the conditions of the certificate may be disregarded at the will of the United States officers in charge of

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such vessels, such certificates in such cases being practically of no more value than waste paper, and yet, if lives should be lost on such vessels, through disregard of any of the conditions of a certificate by the Government officers in charge, public censure would fall on this department *prima facie* for issuing a certificate which it had failed to enforce.

L. J. GAGE, Secretary.

The Secretary of War.

EQUIPMENT OF A SHIP.

Tube cleaners held to be articles of the equipment of a ship, and can not be withdrawn from bond free of duty under section 14, act of 1897, as ship supplies.

TREASURY DEPARTMENT, August 15, 1901.

Gentlemen: Replying to your inquiry of the 6th instant, whether tube cleaners used by foreign steamships lines trading between the United States and foreign ports may be imported and supplies thereof kept in bond at New York, Philadelphia, and Boston, for the purpose of being withdrawn, free of duty, for use on foreign steamships leaving the United States as ship supplies, under section 14 of the act of July 24, 1897, I have to inform you that such tube cleaners are, in the opinion of this department, properly articles of equipment of the ship, and as such can not be considered ship supplies within the meaning of section 14 of the act of July 24, 1897. Such articles can not, therefore, be withdrawn from bond free of duty for the purpose stated in your letter.

O. L. SPAULDING, Assistant Secretary, William Somerville's Sons, New York, N. Y.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 11TH DISTRICT,
DETROIT, MICH., Aug 26, 1901.

Notice is hereby given that the pile cluster of the Ohio Central Coal Dock Post Light, Duluth Harbor, Minn., has been carried away and no light is now exhibited from this structure.

The pile cluster will be replaced and the light exhibited from it as soon as possible.

By order of the Light-House Board.

J. C. WILSON, Commander, U. S. N.,
Inspector 11th District.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—WISCONSIN.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., August 23, 1901.

DEVIL'S ISLAND LIGHT STATION.—Notice is hereby given that, on or about August 25, 1901, the work of changing the color of the tower from brown to white will be completed.

The station is located on the northerly end of Devil's Island, the most northerly of the Apostle Islands, southwesterly part of Lake Superior.

By order of the Light-House Board:

N. H. FARQUHAR,
Rear-Admiral, U. S. Navy, Chairman.

CANADIAN SOCIETY OF CIVIL ENGINEERS.

The society will hold its summer meeting in Buffalo on Sept. 26, 27 and 28. Secretary C. H. McLeod has made the necessary arrangements so that the members may have as much time as possible to see the Exposition. The Engineers' Society of Western New York, 975 Ellicott Square, Buffalo, has placed its rooms at the disposal of the visitors. A special committee of the members of the same society, of which G. A. Ricker is chairman, will assist the members of the Canadian society in viewing the works of engineering interest in or near Buffalo.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising or setting will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset, by reversing the east bearing given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the Sun's setting. The bearing may be taken when the Sun's center is on the horizon, rising or setting. The elements which may be obtained by taking these amplitudes are the quantities known as local attraction, variation and deviation, or the total difference between compass and true, or geographical bearings.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Date. Amplitude. Bearing P'ts. Bearing Comp.

Aug. 31... E. 12° N. = N. 6½ E. = E. by N. ½ N.

Sept. 2... E. 10° N. = N. 7½ E. = E. ¾ N.

Sept. 5... E. 9° N. = N. 7¼ E. = E. ¾ N.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION
LAKE MICHIGAN, LAT. 44° N.

Date. Amplitude. Bearing P'ts. Bearing Comp.

Aug. 31... E. 13° N. = N. 6½ E. = E. by N. ½ N.

Sept. 2... E. 11° N. = N. 7 E. = E. by N.

Sept. 5... E. 10° N. = N. 7½ E. = E. ¾ N.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Date. Amplitude. Bearing P'ts. Bearing Comp.

Aug. 31... E. 13° N. = N. 6½ E. = E. by N. ½ N.

Sept. 2... E. 11° N. = N. 7 E. = E. by N.

Sept. 5... E. 10° N. = N. 7½ E. = E. ¾ N.

LAKE SUPERIOR, LAT. 48° N.

Date. Amplitude. Bearing P'ts. Bearing Comp.

Aug. 31... E. 14° N. = N. 6¾ E. = E. by N. ¼ N.

Sept. 2... E. 12° N. = N. 6½ E. = E. by N. ½ N.

Sept. 5... E. 11° N. = N. 7 E. = E. by N.

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

FIRST CRAFT ON LAKE ERIE.

It is 222 years since sailing actually began on Lake Erie. The sailing of the Griffon, the first sail boat known to the waters of Erie was celebrated last Wednesday at La Salle, by the Frontier Landmarks Association. This organization is composed of delegates from the patriotic societies, the Sons of the Revolution, Sons of the American Revolution, Daughters of the Revolution, Buffalo Historical Society, Society of Colonial Wars and Historical Society of the Niagara Frontier.

The sailing of the Griffon was commemorated by marking the spot on which the vessel was built, which was on the Angevine farm where the ways on which she was set up have been dug up recently. At any rate the find is authentic enough for the purpose of the society. Peter B. Porter made an address and Mrs. John Miller Horton drove a stake on the site of the building that protected the Griffon while in course of construction. A boulder with bronze tablet suitably inscribed is to be put in position later.

The Griffon was ready for sailing in May, 1679, but had to wait a long time for a favorable wind before going up the lake on the first trip that ever furrowed its waters with sail power.

BUFFALO GRAIN ELEVATOR TRUST.

The suit of Spencer Kellogg, owner of the Kellogg elevator, Buffalo against the Lehigh Valley Railroad Co., affords an important test of the right of a company to discriminate between different patrons in rates. Mr. Kellogg is not a member of the Western Elevating Association. He alleges that the railroad company charged him one-half cent a bushel more for transporting 50,000 bushels of wheat from Buffalo to New York than was charged to elevators in the association. He sued to recover the amount of the excess charge and Judge Braulein has decided in his favor. The case will undoubtedly be appealed to the higher courts and thus will serve the purposes of a test.

It is more interesting because the railroad company, in its defense, did not apparently deny the discrimination, but alleged its legal right to discriminate on the ground that the elevators in the association were a part of its regular shipping facilities, of which Mr. Kellogg refused to avail himself. Hence, if the railroad company should win on appeal, it would follow that no elevator using railroads for transportation could expect to do a profitable business outside of the association. It looks like a bold contention for the railroad company to seek to establish.

STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade, August 24th, 1901.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo.....	500,000	298,000	555,000	33,000	2,000
Chicago.....	4,570,000	7,450,000	1,305,000	197,000	2,000
Detroit.....	325,000	50,000	98,000	110,000	7,000
Duluth.....	1,235,000	966,000	463,000	197,000	145,000
Fort William, Ont.....	291,000			3,000	15,000
Milwaukee.....	145,000	444,000	103,000		
Port Arthur, Ont.....	30,000				
Toledo.....	721,000	430,000	670,000	310,000	2,000
Toronto.....	19,000		400,000		400,000
On Canals.....	888,000	249,000	72,000		10,000
On Lakes.....	576,000	847,000	418,000		
On Miss. River.....					
Grand Total.....	26,007,000	12,205,000	6,214,000	1,063,000	717,000
Corresponding Date, 1900.....	49,966,000	7,432,000	8,068,000	734,000	517,000
Increase for week.....	762,000	578,000	668,000	128,000	465,000
Decrease " "					

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

A BEWILDERED ADMIRAL.

The old Admiral, whose long sea service had given his legs a decided outward curvature, once had a singular adventure on this account with a ship's pet.

The crew of the ship owned a large black spaniel, and took great pains in teaching him to jump. A man standing up would put one foot against his other knee, thus making a hole for Nep, the dog, to make his leap through. The dog always jumped through the aperture readily, though if his trainer's leg happened to be short, it was a tight squeeze.

One day the Admiral came aboard from the flagship on a visit of inspection. Happening to walk to the forward part of the ship, he stood there for a few minutes conversing with the officer who had attended him.

Here he was spied by the dog. Nep stood a moment surveying the Admirals bow legs. Suddenly the dog made a rush at the legs and a mad leap through the tempting gap.

In astonishment at the black tornado that had passed beneath him, the Admiral whirled quickly about to see what was the cause. The dog took this action as a signal for an "encore," and jumped again.

Once more the Admiral turned, and again the dog jumped. The bewildered face of the Admiral and the serious attention of Nep to what he imagined was his business were too much for the gravity of the bystanders, and, forgetting the respect due to rank they all roared with laughter.

A sailor, however, had enough presence of mind to break from the crowd and catch the dog by the collar. He led him off, and Nep seemed to wonder why he did not receive the praise due to such spirited efforts.

The excited Admiral got but an imperfect explanation of the affair from the spectators, for they could hardly tell him that his legs had been used as a circus hoop for a fore-castle dog. Perhaps to his dying day the occurrence was a mystery.—San Francisco Argonaut.

THE LAST OF THE U. S. S. MINNESOTA.

Bids have been opened at the Navy Department for the sale of the United States steamer Minnesota, now at the Boston navy yard. The appraised value of the historic old craft, which was built in 1854, was \$15,000. T. H. Butler & Co., of Boston, were the highest bidders, their figures, which were accepted, being \$25,735 38. The vessel's boilers and machinery will be taken out at some wharf and then she will probably be broken up.

The Minnesota was a 40-gun wooden frigate. She is 264 feet 8 inches in length, 51 feet 4 inches beam, and a mean draught of 23 feet. Her displacement is 4,700 tons. She had an indicated horse-power of 1,000, equal to 9.2 knots. When she was in commission her armament consisted of eight 9 inch smooth-bore guns, one 60-pounder, two 3-inch howitzers, two 20-pounders and three 12-pound smooth-bore howitzers.

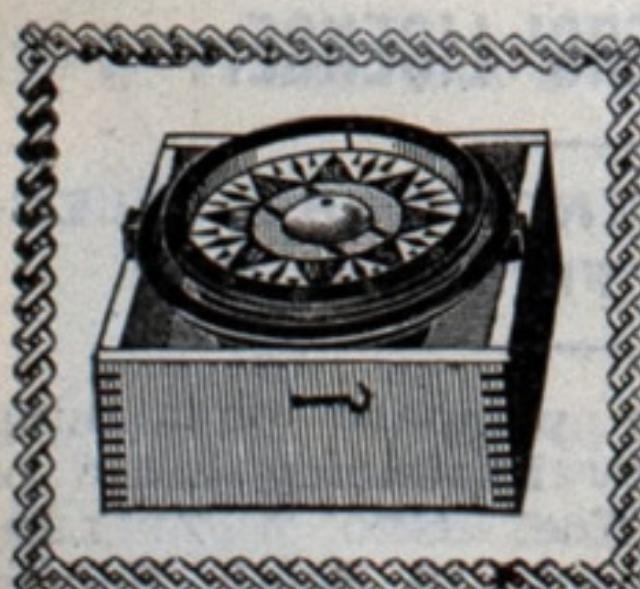
For many years the famous old craft—which participated in the memorable Monitor and Merrimac contest in Hampton Roads in 1861—was used as a receiving ship at Boston. A few years ago she was the home of the Massachusetts naval militia.

THERE was a triple launching of three torpedo boat destroyers for the United States navy on Aug. 15 from the yards of the Maryland Steel Company at Sparrow Point, Md., when the Whipple, Truxton and Worden, each took the water successfully in turn, in the presence of a large assemblage. Miss Isabelle Truxton, of Norfolk, Va., christened the Truxton; Miss Elsie Pope, of St. Paul, Minn., the Whipple, and Mrs. Emilie B. N. Worden the Worden.



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Lake Michigan & Lake Superior Transportation Co.'s steamer Manitou.

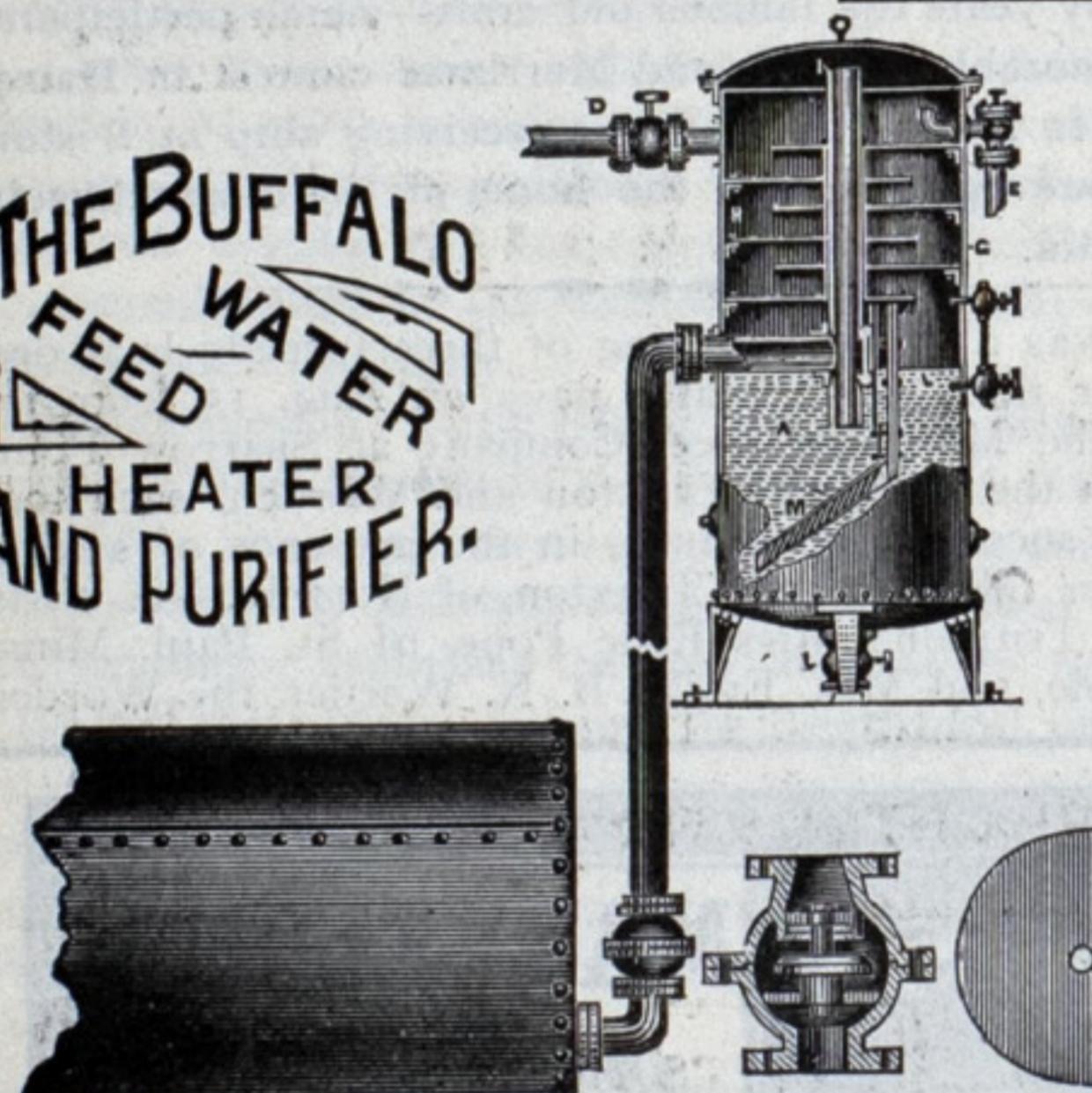
Bessemer Steamship Co.'s steamers S. F. B. McRae and Douglas Houghton.

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Red Star Line's steamers Robert Mills and Wyoming.

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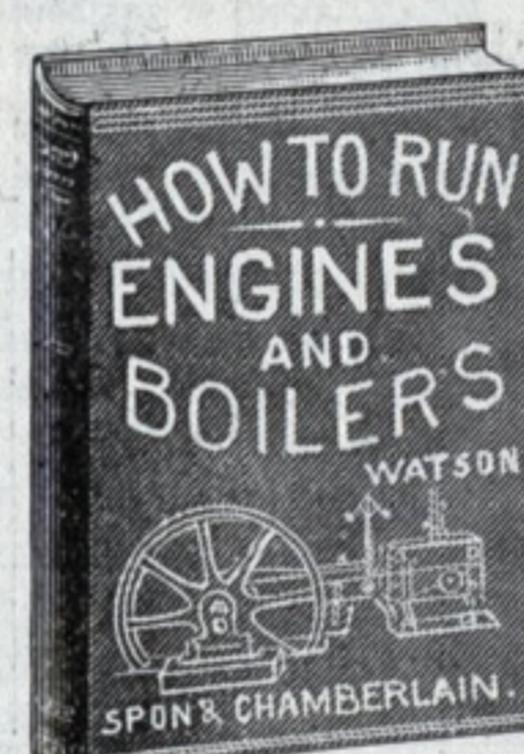
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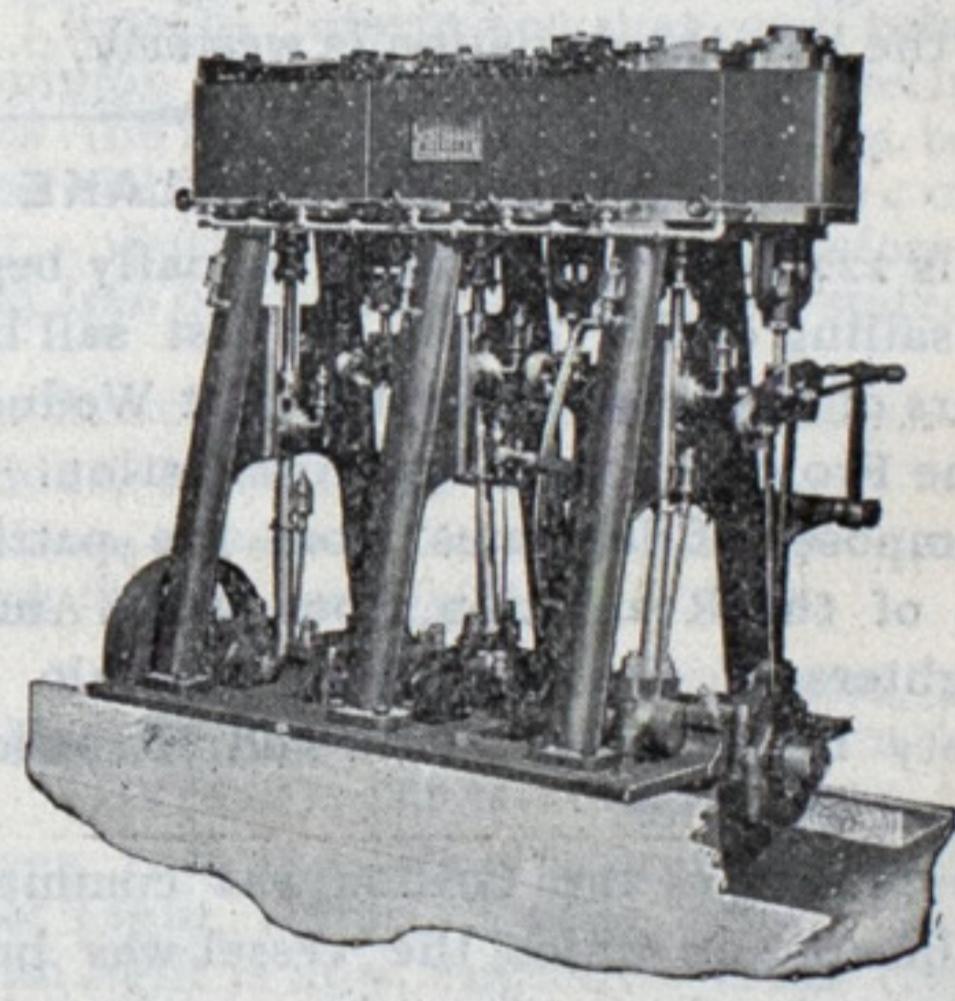
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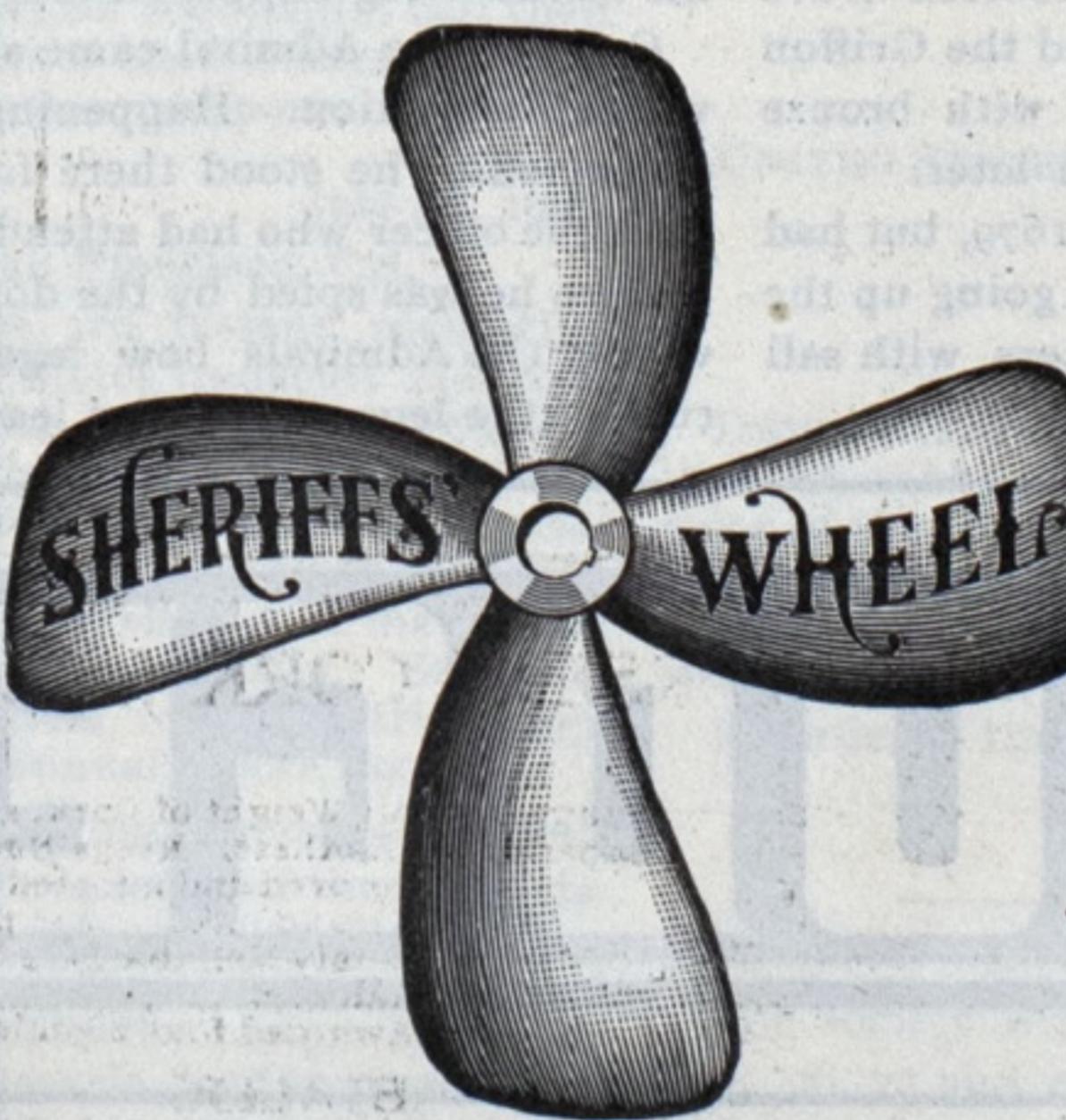
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FLOTSAM, JETSAM AND LAGAN.

Fred. Spencer, who has charge of the lights on the wreck of the Baltimore, reports that part of the deck and cabin of the wrecked schooner Sheldon has washed ashore.

Capt. Stephen A. Jackson, perhaps the best-known survivor of the great race of early lake captains, died at Kenosha last Thursday after a long illness. He was seventy-four years old.

Twenty-eight new schooners have been added to the register at Lunenburg, Nova Scotia, this season, twenty-six of which were built at that port. Twelve more are under contract for launching this year.

The contract for a steel steamer to replace the Druid in the Quebec service of the Department of Marine and Fisheries, has been awarded to Fleming & Fraser, of Paisley, Scotland. The price is \$110,960.

The gasoline yacht Jennie Bell will go into the mail route from Washington Island to Hedge Hog Harbor, across Death's Door, making daily trips. This is a decided improvement in the postal facilities of Washington Island, for the gasoline yacht takes the place of a sailboat.

The project for consolidating the passenger lines running on Lake Michigan has been again taken up by capitalists interested in the existing lines. A number have declared themselves in favor of the plan and it is expected that some decisive action will be taken at the end of the excursion season.

John Craig, of the Craig Ship Building Co., Toledo, was in Chicago again Friday. He was as reticent as ever regarding the business nature of his frequent visits there and would not discuss the prospects of more new passenger boats for that port, the Williams line is about the only one that has come out with a statement that it will build a new boat this winter, and it is possible that it is this order Craig is after.

The Harts, of Green Bay, bought the fire-damaged steamer City of Louisville last spring. The price paid for the craft was \$11,000, and it cost about \$8,000 to rebuild and re-furnish the cabin and make other repairs and changes. They have since been offered \$57,000 for the steamer, or a clean advance of \$37,000 on their deal.

Dredge No. 3, belonging to Breymann Bros., the dredging contractors, which sunk some weeks ago near the mouth of the straight channel, Toledo, during a heavy squall, in which the tug Goldsmith, owned by the same firm, was also sunk, has been raised and brought into port by the tug Marinette and the wrecker Mary Groh.

On September 1st the steamer F. B. Spinner will make her first appearance in lake traffic since her collision with the steamer Coffinberry in the "Soo" river last October. The Spinner was sunk in the collision, and although raised shortly afterward and taken to the shipyards at Manitowoc, she lay idle ever since pending a settlement of the complications arising out of the collision.

Capt. James Davidson, of West Bay City, is quoted as saying that the independent shipbuilding plant in opposition to the trust will surely be built. Capt. Davidson says he wants 25 acres of land, Erie or Buffalo locations preferred, on which he will build a plant with a capacity of 12 to 14 big ships each season. He says the plant will be put up regardless of cost; that everything will be of the best, and that when completed the yards will be the largest and finest on the lakes. The captain says that he is alone in the venture.

The plans for a small revenue cutter for patrolling St. Mary's river are now ready and the department will soon ask bids for her construction. Congress provided an appropriation of \$75,000 for the construction of this vessel, and that amount will give an excellent boat. According to the plans, the steamer will be 110 feet long, 20½ feet beam and 12 feet deep, with a displacement of about 215 tons. She will be

constructed of steel and have a steel deck house. Service-patrol boat for regulating the passage of vessels in the river, and watching that the "rules of the road" are properly observed at all times, etc.

Capt. Gibson has informed the Hydrographic Office that the steamer Chili, while steaming through Rock Island passage, Green Bay, drawing 18 feet 5 inches forward and 18 feet 9 inches aft, struck a rock four and a half miles east half north from Rock Island light-house, a point where the chart indicates from fifteen to seventeen fathoms of water. Judging from the injury to the steamer's bottom the obstruction is smooth and from six to eight feet in diameter.

It is rumored that the Ann Arbor road will soon award a contract for another big car ferry. A new terminal is to be established at Manistique and Wells, and the need of more boats is felt. President W. R. Burt and General Manager Henry W. Ashley, of the Toledo and Ann Arbor Railway, were in Manistique a few days ago and arranged with the Chicago Lumber Co. for a terminal point for their car ferry line. The company has a warehouse there, built three years ago. Work will be commenced at once on docks, and it is thought the ferries will ply between that port and Frankfort before the end of the season.

The schooner Crete of the Davidson line, which was aground at the Limekiln Crossing, was libeled on Saturday last on a claim of \$3,500, the result of a suit for damages arising from a collision between the Crete and the Canadian steamer Carmona. The Crete was in tow of the steamer Shenandoah when the collision occurred near Sarnia in June, 1899. The papers were placed in the hands of Deputy Sheriff Rumbull of Windsor, who went to Amherstburg to libel the Crete, while she was stranded in Canadian waters, her master went to Windsor and gave bond for the amount of damages claimed. Unless a settlement is arrived at the case will be heard before the Canadian maritime court.

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page 18.

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Government Proposals.

U. S. ENGINEER OFFICE, Jones Building, Detroit, Mich., August 8, 1901. Sealed proposals for dredging under continuing contracts, for improving Hay Lake Channel, St. Mary's River, Mich., will be received here until 12 noon (Standard time), August 31, 1901, and then publicly opened. Information furnished on application. G. J. LYDECKER, Col., Engrs. 33-35

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The Ohio Fish and Game Commission will receive bids at Auditor of State's office, Columbus, Ohio, 2 p. m., Tuesday, September 24th, for the construction of a patrol boat for use in the waters of Lake Erie. Plans and specifications may be seen at Auditor of State's office, Columbus, Ohio, or copies of same may be secured upon application from the Secretary of Ohio Fish and Game Commission, Athens, Ohio. The Commission reserves the right to reject any or all bids. Bids may be mailed to Ohio Fish and Game Commission, care Auditor of State's office, Columbus, Ohio. 34-35

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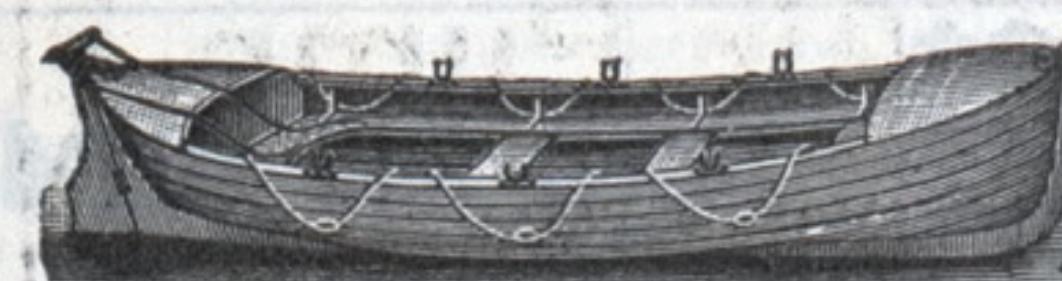
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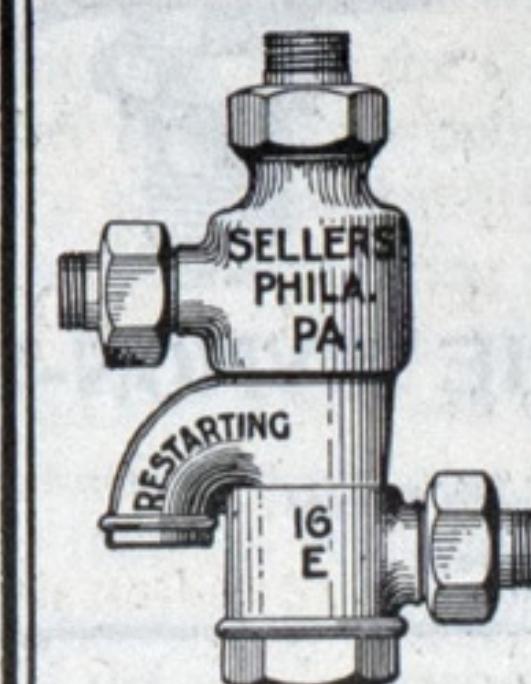


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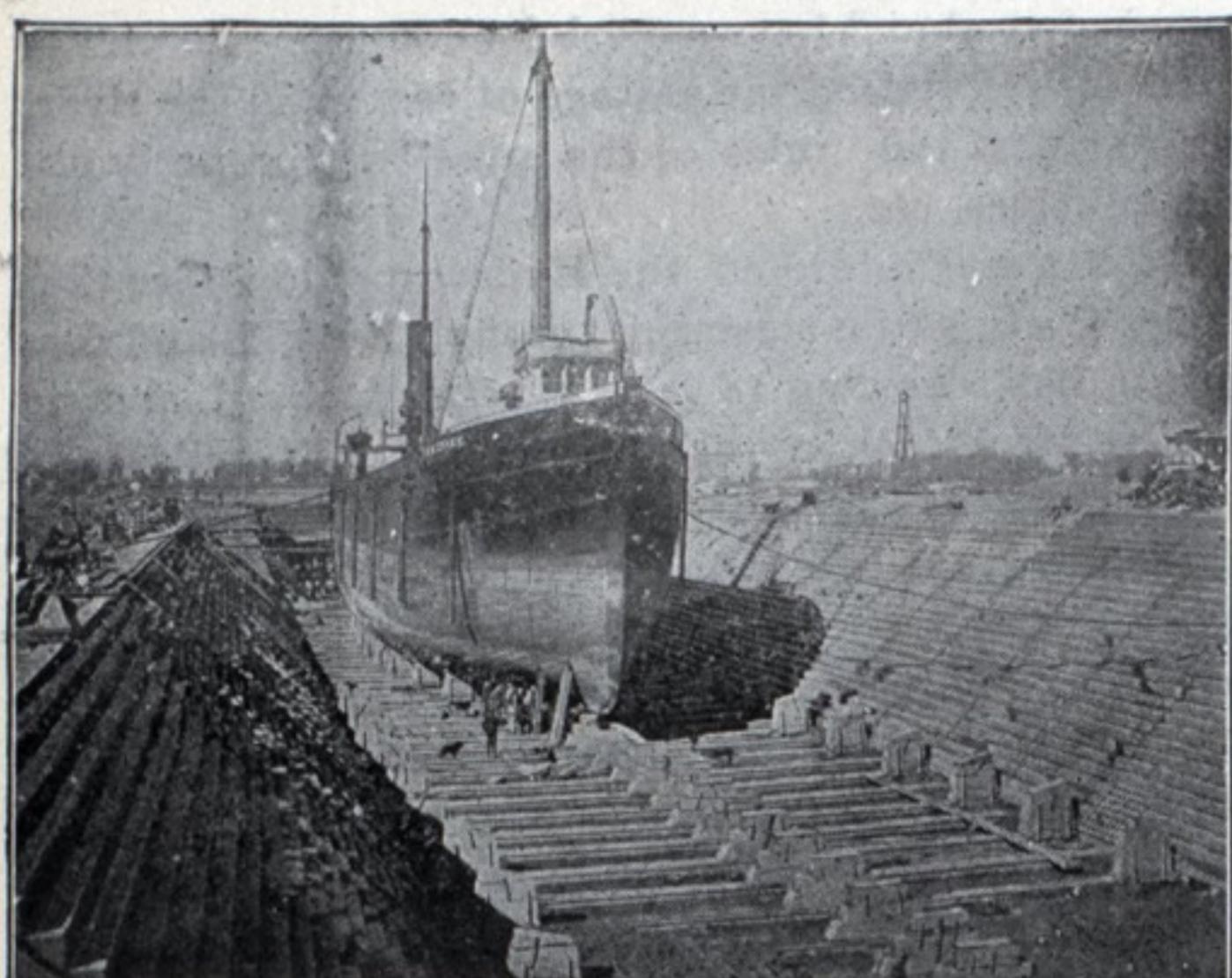
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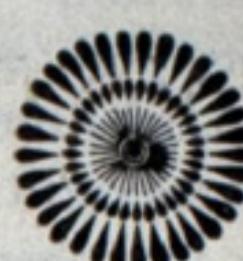
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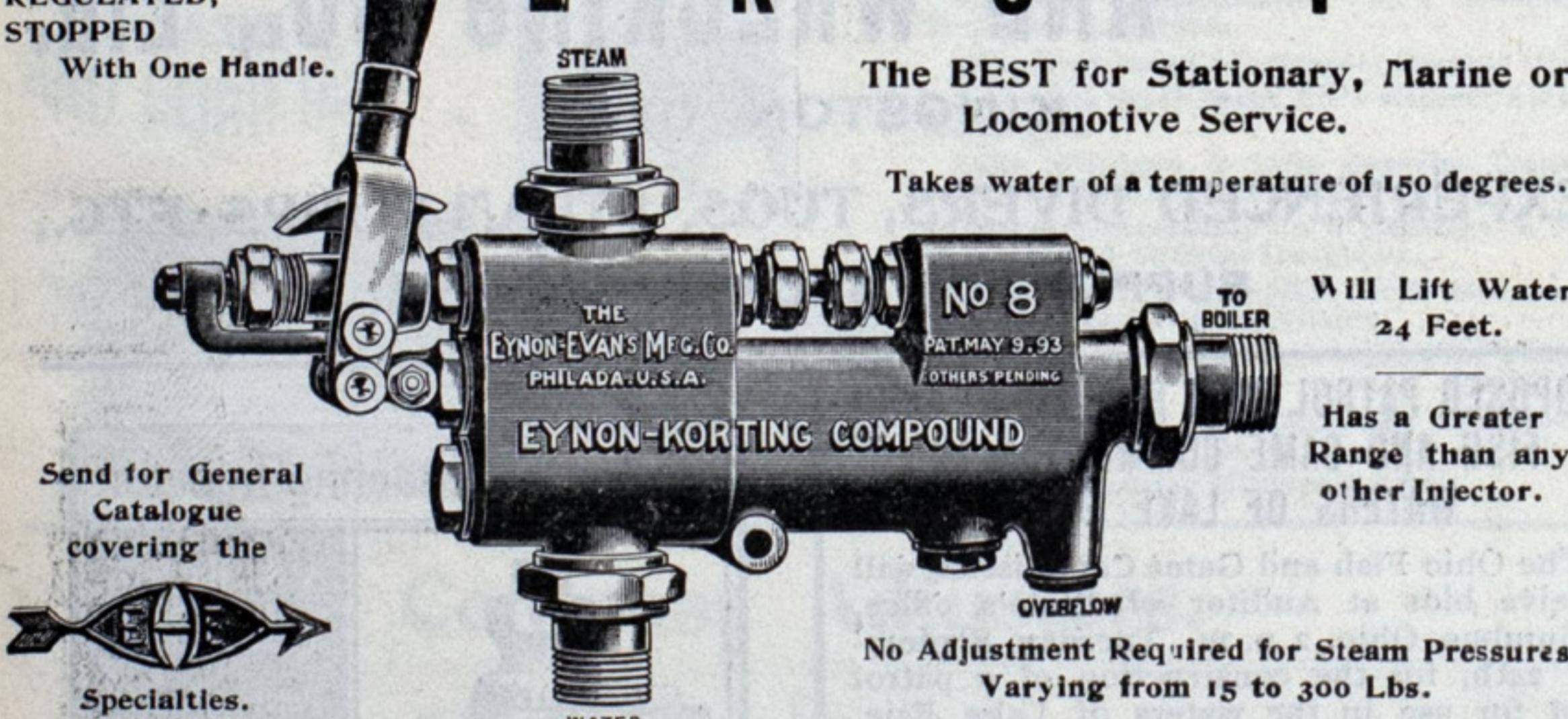
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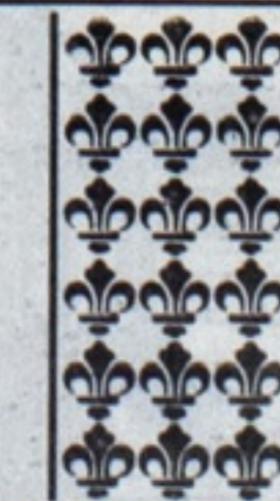
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